A Clinical Lecture

ON A

CASE OF HERNIA STRANGULATED IN THE FORAMEN OF WINSLOW:

AND THE

TREATMENT OF GREATLY-DISTENDED SMALL INTESTINE.

DELIVERED AT THE BRISTOL GENERAL HOSPITAL.

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GENTLEMEN,—The form of internal hernia, an instance of which I am about to describe—hernia into the foramen of Winslow—is a very rare form. There are only about a dozen cases on record (one was reported by Mr. Carwardine in the Infirmary last year), and there is only one successful case of operation for strangulation in this hernia. My own case was unfortunately not successful, but all the symptoms of strangulation were relieved by the release of the strangulated bowel from the foramen, and the patient seemed almost certain to recover, when, seven days after the operation, he died a few hours after developing serious symptoms, and we found *post mortem* some pelvic peritonitis, due to leakage at the attachment of the opened bowel to the parietal peritoneum, into the pelvic cavity. This certainly did not seem sufficient to cause his death, for he was a strong, middle-aged man, but nothing else was found *post mortem* that would account for it.

Mr. W. was seen in consultation with Dr. Burroughs at 12.30 on Tuesday, October 6th, 1908.

History.

Directly after defaecation, about 9 a.m. on the previous Sunday, pain in the central and lower parts of the abdomen came on, and continued. It was paroxysmal and severe. Vomiting commenced the same evening, and had been frequent from that time. The vomit consisted of bile and watery fluid. No flatus had been passed since the onset of the pain, and only a very little hard motion had come away after an enema, and nothing after the administration of purgatives.

Condition on Examination.

The abdomen was moderately distended, and slightly tender just to right and below umbilicus, but not rigid. There was marked intestinal splashing. Nothing made out on rectal examination. No distended coils were seen. There was no history of any previous attacks. Dr. Burroughs told me he had not found his temperature raised above 99° at any time. Pulse was 88 and good strength. There was no external hernia. The symptoms of acute intestinal obstruction (mechanical) were thus obvious and the need for coeliotomy clear.

Operation.

He was admitted to the General Hospital in the afternoon, and I operated at 4 p.m. On opening the peritoneal cavity considerable amount of blood-stained fluid escaped. The last two feet of the ileum were empty, but all the rest of the small intestine was red and greatly distended. On tracing the empty bowel I found it passed through a hole in some fixed structure, which from its position I thought must be the foramen of Winslow; but my incision did not allow me to see it. I drew out the intestine without much difficulty, and found I had withdrawn the junction of empty and distended gut, and on the latter was a groove of constriction.

The distension of the small intestine was so great I did not like to trust to spontaneous evacuation. I tried first to force on the contents through the empty coil into the large bowel, but could make very little progress. So I clamped off a few inches and tied in a very small Paul's tube. Through this, by a kind of "milking" of coil after coil outside the abdominal cavity, I was able to evacuate the intestinal contents in a moderate time, and replace the intestine within the abdomen in a nearly empty condition. The coils of intestine whilst outside the abdominal cavity were as far as possible covered with a sterile towel wrung out of quite hot saline solution. I finally fixed the portion of bowel into which the Paul's tube was inserted to the parietal peritoneum by several fine thread sutures, and closed the abdominal wound around it. A very thin rubber tube conveyed intestinal contents from the Paul's tube into a bottle. The pulse ran up to 140 during the operation and remained at that at the end, but it was a pulse of fair volume and strength.

After-history.

On the following day, October 7th, my note says that there had been no vomiting since the operation (not even anaesthetic vomiting), and that his abdominal pain had ceased. Some liquid faeces had discharged through the tube. His pulse was good. Some moderate distension, with slight abdominal tenderness, was present. On the 8th his condition was much the same. On the 9th he had much pain in the right loin, removed by ½ grain morphine. There was no vomiting, and his pulse kept good. On the 11th the abdomen was flat and not tender. On this date I noticed that his Paul's tube had not separated, but at one spot the parietal peritoneum, where it had been sewn to the bowel around the inserted tube, had sloughed and left a funnel-like opening into the peritoneal cavity—that is, amongst some coils of intestines. This space seemed well shut off by intraperitoneal adhesions. However, I packed it with a little iodoform gauze. On the 12th the Paul's tube began to separate and was removed. The bowels were acting freely through the artificial opening and slightly per anum. On the morning of the 13th he complained of pain in the lower abdomen. There was no vomiting. He did not complain of this later in the day, and his pulse kept good. In the evening he was reading the newspaper. There was no pyrexia. But at 10 p.m. the night nurse noticed he was lying partly uncovered, and he must have looked worse, for she felt his pulse and found it very bad; and by 3 a.m. he was dead. It was almost like a sudden death, in a man apparently doing fairly well.

Necropsy.

The *post-mortem* examination showed that the union of the open bowel in the wound to the parietal peritoneum was easily broken down, and that leaking had occurred at the funnel-shaped opening referred to in my note of the 11th. The intraperitoneal adhesion around this had not been firm, and infection of the pelvic peritoneum had taken place. There was a little lymph on a few coils of bowel around this, and an extensive pelvic peritonitis extending from it, but the rest of the peritoneal cavity was free from inflammation. The heart muscle was not degenerated, nor was there any other form of cardiac disease. It was evident that the intestine must have been strangulated in the foramen of Winslow, for there was no other opening in which it could have been gripped. A careful search was made for such openings in the region of the duodenal-jejunal junction and elsewhere. The foramen of Winslow easily admitted one large finger—that is, it was about the usual size, but very often it is hardly open, as it was in this case, and is more of a slit, and in some cases it is closed by adhesion. In some of the cases of hernia into the foramen of Winslow some abnormality of the mesocolon or mesentery has been observed. Nothing of this kind was noticed in this case, but I did notice that it seemed quite easy for the small intestine to reach the foramen: possibly the mesentery may have been unduly long.

The most recent and exhaustive account of retroperitoneal hernia with which I am acquainted is in Mr. Moynihan's book on the subject, the second edition of which was published in 1906. In Sir F. Treves's work on intestinal obstruction you will also find very interesting information on the subject. As you can consult both these works, I will only very briefly refer to the subject.

Either the large or small intestine may be herniated through the foramen of Winslow, and when it has passed into the lesser sac of the peritoneum it may pass out through a rent in its wall, either the gastro-hepatic omentum or the transverse mesocolon, and in one case it was strangulated not by the foramen of Winslow, but by the rent in the transverse mesocolon. The symptoms are those of any form of strangulation of the intestine, with possibly the addition of a resonant swelling in the upper abdomen if a large amount of bowel is herniated into the lesser cavity of the peritoneum. In one recorded case[1] the symptoms were those of subacute obstruction, the gut not being strangulated. Curiously enough, in this case it was impossible at the operation to reduce the large amount of intestine which had passed through the ring, but spontaneous reduction occurred soon after. That has been the difficulty in many of the cases of strangulation. It was so in Treves's own case. The ring is bounded by such important structures that it cannot be divided. Moynihan suggests that the difficulty of reduction may be due to the formation of a volvulus within the lesser sac of the peritoneum, and advises that a free opening into the sac shall be made through the gastro-hepatic or gastro-colic omentum, and that any volvulus should then be untwisted, and, if that is not enough to enable the surgeon to reduce the hernia, that the distended coils should be opened and their contents evacuated, and the opening sutured. Fortunately, in my case there was not the slightest difficulty in withdrawing the small strangulated coil of bowel. The only case of recovery after operation for strangulation in the foramen of Winslow is Delkeskamp's case.[2] The hernia was a very large one, and consisted of both colon and small intestine. The lesser sac was freely opened, and the contents of the herniated colon was expressed into the colon outside the ring, and thus it was possible to reduce the hernia.

As I have already stated, I noticed nothing abnormal about the intestines in my own case beyond the strangulation.

The foramen easily admitted a fairly large finger. In one recorded case there was a common ileo-caecal mesentery; in another the caecum was "undescended." The following conditions have been suggested by Moynihan as likely to allow of the hernia: (*a*) A common mesentery for the whole of the large intestine; (*b*) absence of the secondary fusion of the ascending colon to the posterior abdominal wall; (*c*) abnormally large size of the foramen of Winslow; (*d*) abnormal length of the mesentery and consequent undue mobility of the intestine.

In this case, when I had withdrawn the strangulated bowel from the hernial opening, I had removed the mechanical obstruction; and you may ask: Why was I not content with this? Why did I not leave the intestine to empty itself in the course of time? Probably it would not have emptied itself. The obstruction might have persisted though the mechanical obstruction of strangulation in the ring had been removed. When small intestine becomes greatly distended, it may fail to contract, because it is paralysed, and it may be unable to empty itself even if it can contract, because of the kinks in its course, due to the sharp curves of its over-distended, waterlogged coils. You must not think of distended small intestine as presenting gradual round curves along which the intestinal contents can easily pass, but of intestine with very sharp curves, with the coils pressed together, within the confined peritoneal cavity, by their own distension, and heavy with fluid contents. You will then understand why the gut may not be able to empty itself after the removal of such an obstruction as strangulation in a ring. Fortunately, in herniotomy, when the strangulating ring is divided and the bowel returned within the abdominal cavity, in the great majority of cases the bowel does empty itself, for operation is done before great distension has had time to come on, and, of course, in a case of internal strangulation, operated on early, there would be no need to empty the gut. But, if you relieve the obvious mechanical obstruction and leave greatly distended intestine within the abdomen, your operation may fail to relieve the patient. This is well recognized by surgeons. It may, however, be a difficult matter to decide how distended the intestines must be before we need empty them—that is, what condition of distension Nature can deal with. I will give you some details of a case under my care, some weeks before I operated on this case of hernia into the foramen of Winslow, which will impress on you the inability of Nature to deal with much-distended small intestine, due to such an obvious mechanical obstruction as strangulation under a band may cause.

The patient was a man 65 years of age, whom I saw in consultation with Dr. Cook and sent into the hospital and operated on on August 22nd last. I found the small intestine strangulated under a band, a short distance from the ileo-caecal juncture, and the intestine on the proximal side of the obstruction considerably distended. However, it seemed to me at the time of the operation that the distension was not so great that the bowel could not slowly empty itself, and I therefore contented myself with pressing on some of the contents of the over-distended bowel into the empty coils, and did not make any opening for evacuation of intestinal contents. But faecal vomiting persisted and the distension increased. Twenty-four hours later I again opened the abdomen—as at the first operation mainly under stovaine spinal anaesthesia—and fixed a very small Paul's tube into the lower ileum, and almost emptied the intestines through this, in the same way that I did in the case of hernia into the foramen of Winslow. Even this did not relieve the symptoms, for next day offensive vomiting again recurred, and more distension than before. I removed the Paul's tube and passed a soft rubber tube as far up the gut as I could. This did not evacuate any intestinal contents, but a spontaneous evacuation of gas took place just after and the distension lessened.

I passed the stomach tube and removed 2 pints of what looked like bile, but was rather offensive. He did not vomit again, but no faecal discharge took place from the opening in the bowel for another forty-eight hours, and then the abdominal distension subsided; but by this time his strength had failed, and he died four days after the first operation. The *post-mortem* examination showed the upper jejunal coils still very greatly distended. The more distal coils down to the original seat of strangulation were very dark and loosely adherent.

You very likely think that, if a case of mechanical obstruction of the bowel is operated on, the obstruction removed, and the bowel, if strangulated, is not too severely damaged to recover, the patient will do well, provided he has strength to stand the shock of the operation. I wish it were so. One of the great terrors of the surgeon is great distension of the small intestine. One of the most experienced abdominal surgeons of the past taught us how hopeless it was to leave a patient with greatly distended intestines, even though a mechanical obstruction had been removed. How best to deal with that greatly distended intestine is the problem which I have very anxiously considered, and about which I have something further to say. First, however, let me give you another example of the difficulties you may meet with in the treatment of this condition.

A boy, 12 years of age, was sent to me by Dr. F. Peake at this hospital on March 7th, 1902, with a greatly distended abdomen. I operated at once, and found all the coils of small intestine red and greatly distended, and removed a perforated appendix, and evacuated an abscess in connexion with it. The suppuration was quite localized. As the distension increased after this operation, I opened the abdomen again forty-eight hours later, and found there was a definite mechanical obstruction from matting in the wall of the abscess. Greatly distended and empty bowel joined in the matted segment. I released the adherent coils, and then evacuated the distended intestine, as I did in the case of hernia into the foramen of Winslow, but I did not use a Paul's tube, but evacuated the intestinal contents through a minute incision which I afterwards sewed up. The next day the distension was again very great. I applied cocaine to the sewn-up wound, removed some stitches, sutured a distended coil lying beneath to the skin, and punctured it with an aspirating trocar cannula. One rush of gas occurred, but nothing further, and the distension persisted. Nothing further escaped even after an interval. Clearly only one coil had been emptied up to the next kink above it. The boy died, and the *post-mortem* examination showed that this was so. It also showed that no mechanical obstruction persisted other than the kinks in the distended coils.

Although it is generally agreed that greatly distended small intestine cannot always—perhaps generally—empty itself, yet it has been frequently urged that the right thing to do is to make an opening in the distended bowel through which it may gradually empty itself—to fix a coil in some way in the abdominal wound and drain it. But what can we expect to gain by this? If the bowel is paralysed and kinked, and therefore cannot empty itself, how are you going to overcome these difficulties by making an artificial opening in it? The only way in which it is conceivable such an opening could help would be this. The empty coils within the abdomen, into which the contents of the over-distended ones would have to be discharged, would be under pressure within the peritoneal cavity, and it might not be as easy for the over full coils to empty into them as through a direct external opening.

But there is a fallacy here. By making an external opening you may immediately empty one or two coils (probably only one): now that empty coil also lies within the abdomen subject to the pressure of the surrounding over-distended coils confined within the abdominal cavity, just as the empty coils below the seat of removed obstruction do, and it will therefore be as difficult for the distended bowel to empty itself into the coil as into the empty ones below the level of obstruction.

But if you have a direct external opening, what reason have you to expect that the partly paralysed and kinked gut will be able to empty itself through it? In one case I have related to you I brought a distended coil to the surface and opened it, and gas came out with a rush and the distended coil collapsed, but the coils above remained over-full and kinked just as if I had made no external opening at all. Again and again I have turned greatly distended coils of small intestine out of the abdomen, and opened a coil, but one never sees the one opening empty more than the one coil, up to the next kink above it. Yes, but you may say, you cannot expect coils of intestine protruded from the peritoneal cavity, even if covered up by a towel wrung out of hot saline solution, to contract and

empty themselves coil above coil, as they might do within the abdomen when anaesthesia has ceased. But even within the abdomen, I know from experience, they may not be able to empty themselves. Think of the pressure to which all those distended coils are subjected within the abdomen; how tightly they will be packed together, how waterlogged and kinked they will be—the more kinked the tighter they are packed together within the abdomen. If you try to return prolapsed, greatly distended coils within the abdomen you will then realize the tightness of this intraperitoneal packing. If you wish to make sure of getting your over-distended intestine empty (or nearly so) there is only one way of doing that, and that is to empty it yourself. You must turn the distended coils out of the abdomen, cover them with frequently-changed sterile towels wrung out of hot saline solution, make an opening in the distal end of the distended bowel, and then by passing the whole length of the intestine through your thumb and finger, empty it coil after coil. You must not begin at the proximal end or you will get too much fluid concentrated into the middle coils. You must first empty several coils near the artificial opening, and then work from nearer the proximal end into these. Finally you start at the proximal end and work all along to the opening. It is by no means easy to anything like empty the gut, though it is easy to get away a great quantity of fluid and gas. There is a constant tendency for the contents to escape your finger pressure and to pass backwards. It is therefore well to follow up the evacuating thumb and finger of one hand by the thumb and finger of another used as a sort of travelling clamp, or an assistant can take this part of the work. Rubber gloves, instead of being a hindrance, are really a help in evacuating the gut in this way—"milking the gut," as it is sometimes called—for they let the bowel slip through without the slightest friction. I have tried forcing the contents of the distended coils into the empty (and usually contracted) coils. It is easy to fill these up, and perhaps in time one might succeed in forcing the contents of the distended coils on through them into the large intestine, which could then be stimulated to empty itself by the administration of a hot turpentine enema. But it is a very slow and imperfect method, and I have never been able to get a sufficiently satisfactory evacuation of the distended intestine in a reasonable time by it.

But unfortunately all this manipulation of the gut is just the very thing most likely to bring on shock; indeed, the turning out of the intestine alone is likely to do this. We may then return the intestines empty within the abdomen, but the patient may speedily die from shock. If the patient is in a condition of collapse at the time of the operation, it is, it seems to me, useless to attempt it, for we shall only hasten the end by the shock produced. But if the pulse is fairly good I think it is the right thing to do. That it is the only way in which we can satisfactorily deal with greatly distended, partly paralysed, and kinked small intestine, I feel convinced, and I pointed this out in a letter which I published in the *Lancet* of April 11th, 1903. If you have greatly distended large intestine, every one knows it is quite enough to make an artificial opening, and it will empty itself. It does not lie in a series of loops which form kink after kink when over-distended and subjected to pressure. However distended the colon may be behind a mechanical obstruction, if you make an artificial opening it will empty itself in a reasonable time, and generally very quickly. This makes me sceptical whether over-distended small intestine is really paralysed, or even partially; whether it is not wholly a question of kinking at its flexures.

I have in this lecture spoken of it as paralysed, for this is the generally received view, and we might expect intestine as obviously congested as such distended intestine almost always is, to have its muscle contraction somewhat interfered with, at any rate. And when we do colotomy for a growth in the sigmoid, we must remember that the process has been slow, and there has been time for hypertrophy of the muscle of the colon to take place. Still, I must say it seems to me that if great distension can so little paralyse the large bowel, it is a question whether it can to any extent the small.

I have so far said nothing about the kind of opening that should be made in the bowel for the purpose of evacuating its contents. This must be so arranged that there will be a minimum risk of soiling the peritoneum. I used to get an assistant to take a coil of bowel, and hold it over a basin well away from the other coils, isolate it and his hands with a towel, nick the gut, and let the contents flow out, then clean it up, and sew up the opening. I now adopt what I think is a safer method. I clamp a few inches of gut, and fix into this a very small Paul's tube, less than $\frac{1}{2}$ in. in diameter. To this tube several feet of very soft light rubber tubing, as thick as the rubber of an operating glove, is attached, and, as all the intestinal contents are conveyed through this to a receptacle removed from the area of operation, there is no risk of infecting the intestines, provided the gut and the hands are cleaned well after inserting the Paul's tube. A Carwardine's tube could, of course, be used for the same purpose if it was determined to remove it at the end of the evacuation and close the opening, but I prefer Paul's tube myself. But it seems to me a question whether one is wise in closing the opening. The condition of the intestinal wall is not the best for repair, and the stitching will take up time at the end of an operation already too long for the patient. My own feeling at the present time is that it is perhaps better to leave in the Paul's tube, and sew the coil to the parietal peritoneum in closing the wound. The faecal fistula thus formed ought to close before long with no mechanical obstruction on the distal side of it. If, however, the distension of coils only involved the upper portion of the small intestine, and the opening had to be near the middle, I should not make a faecal fistula so high, but would rather take the risk of leakage at my junction, and remove the Paul's tube and sew up the opening. Unfortunately in the case which I have made the subject of this lecture, even fixing the gut to the parietal peritoneum did not lead to a firm union at the end of several days, and leakage into the peritoneal cavity occurred. It was particularly disappointing, as the patient had really recovered from the obstruction.

We must realize that, given great intestinal distension in the small intestine in association with mechanical obstruction, the condition will be a very difficult one to deal with, and that its treatment will involve fresh perils, and that if the condition of the patient is such that obviously shock must be fatal, our chance of effectively dealing with it is small. I have not forgotten the use of spinal anaesthesia by stovaine in such cases. Anaesthesia of the upper abdomen by this method is always uncertain. It has seemed to me in some of my own cases of operation within the abdomen to prevent shock, and also in reports I have read of others (Mr. Barker's and others); yet it seems as if it did not wholly abolish shock in all cases, for I have been told by some one watching the pulse in some cases during my operation that it has shown signs of failure when I have been dragging on the abdominal viscera, though the patient felt no pain. How this can be I must leave the physiologists to explain. If the spinal cord is absolutely locked to sensory impulse, how can any impluse be conveyed to the vasomotor centre in the medulla, which would paralyse that centre? I think it will be wise to use stovaine spinal anaesthesia in these cases of marked distension and bad pulse, if the pulse is not so desperately bad as to make such an operation unwise, for even if it only acts on the lower two-thirds of the abdomen it may do very much to reduce shock in evacuating the intestine, even though a little general anaesthetic is required as well. In one of the cases related to you to-day you may remember I used it, but a little general anaesthetic was required as well. There was no serious shock in this case, though manipulation of intestine was considerable.

I have said that I think the only satisfactory way of dealing with the greatly distended, kinked, (?) paralysed bowel is to empty it at the time of operation. But alas! this is not always successful, even when it does not induce fatal shock. I have given you two instances in which the great distension present before such evacuation returned directly after, and vomiting also returned. Why should this be so? It may be that the manipulation of the gut sets up a very mild peritonitis (non-septic), and that to this is due the secondary distension. Adhesive peritonitis was found in both the cases, that is, a degree of peritoneal inflammation causing adhesion but no lymph or pus exudation. This condition was quite marked in the case of the elderly man who had had strangulation, but my

note of the boy only says that "the coils of small intestine had a tendency to adhere together."

The difficulties, then, with which the surgeon has to contend in dealing with the greatly distended small intestine are many. If he only makes an external opening, the kinked and (?) paralysed bowel may not empty itself; and if he empties it at the time of the operation, his manipulations may lead to fatal shock; or, if they do not, the intestine may soon fill up with gas and the obstruction continue. In the face of all this discouragement, what is the lesson to be learnt? I think it is the absolute importance of operating early before great distension can set in, and of operating in acute appendicitis before mechanical obstruction from matting around the diseased appendix can occur. One surgeon of large experience in abdominal surgery has recently written: "The surgery of acute obstruction is disheartening work," and that the mortality is far larger than it ought to be owing to delay in operation.

I have been speaking about greatly distended small intestine in mechanical obstruction. If due to peritonitis, I think the treatment must be the same and the risks will be the same. The uselessness of simply making an opening in a distended coil and expecting all the other over-distended coils to empty themselves through it, seems, if anything, more evident when the whole bowel is inflamed than when it is not.

I do not wish you to think that I consider that it is useless to open distended small intestine without oneself emptying the bowel by a manipulation in every case. It depends on the degree of the distension. There are some cases of mechanical obstruction in which this is the right thing to do. Not long ago I had to do colotomy for a large, fixed, irremovable cancer of the lower colon, and a few months later the man got further obstruction from fixation of small intestine to the mass. In this case, knowing I could not deal with the cause of the obstruction, I brought out a coil of small intestine and fixed a very small Paul's tube in it, and relieved the obstruction in this way. But, if this man's small intestines had been enormously distended and kinked, I do not believe they would have discharged their contents through the opening.

There is just one other matter to which I should like to call your attention. Some surgeons have recommended that we should empty the distended coils by pushing a long rubber tube into them, through the incision made for drainage (I am not now speaking of the method advocated by one surgeon of drawing many feet of small intestine on to a glass tube at the time the intestines are all exposed during the operation); but how can he expect to succeed in passing such a tube through coil after coil of kinked, overladen small intestine? It is interesting that the recommendation has been made, because it implies the recognition of the fact that simply to open distended small intestine may not be sufficient to drain it. But I have proved in the *post-mortem* room how, instead of passing from coil to coil, the rubber tube simply coils up when it meets with the obstruction of the bend, as one might expect. You may think it curious that, if I have no faith in the use of a rubber tube, I should actually have used it in one of the cases I have recorded. I only used it to clear the coil just beyond the opening and had no hope of its doing more.

References.

[1] Hernia into the Foramen of Winslow: Laparotomy; Recovery. A. Neave, *Lancet*, May 28th, 1892. [2] *Beiträge zur klinischen Chirurgie*, lvii, No. 3, 644.

THE AFTER-RESULTS IN A SERIES OF OPERATIONS FOR THE RADICAL CURE OF HERNIA.

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For some years I have paid particular attention to the subject of hernia, especially in regard to its etiology, and the more I study the question the stronger is my belief that the essential cause of all ordinary abdominal herniae is a congenital defect, the presence of a peritoneal diverticulum.

In several communications I have advanced evidence in favour of the saccular theory of hernia. I have pointed out how the same types of sac are met with in the infant and in the adult, how clear the distinction is between the sac of a congenital and that of a traumatic abdominal hernia, and how impossible it is in the case of an inguinal hernia in an adult to distinguish between the so-called "acquired" and the congenital sac.

I have also considered the question from the point of view of comparative surgery; but perhaps the strongest point I have hitherto made in favour of the saccular theory was that, in 200 consecutive *post-mortem* examinations made upon persons in whom during life there was no history or evidence of hernia, in 47 bodies 68 peritoneal diverticula were found either in the inguinal, femoral, or umbilical regions. In many cases the diverticula were bilateral, and in one case occupied both femoral and both inguinal canals.

I now propose to bring forward clinical evidence in favour of the congenital origin of hernia by directing attention to the after-results in a series of operations performed for the radical cure of hernia upon persons whose ages varied from 1 month to 72 years. I have selected the years 1905–6–7 because during that time I adopted the same principle in operating, and also because the cases have now undergone a fair time test. I do not say all these cases are certainly cured, but as over 80 per cent. of recurrences take place during the first twelve months following operation, it is reasonable to believe that the vast majority of these persons have been permanently cured.

The figures include every case of hernia I operated upon during that period, whether in hospital or in private practice, except cases in which the bowel was strangulated.

I have been at considerable pains to ascertain the after-results, and as this is the chief point in the present communication I may say that any bulging at the site of operation was regarded as a recurrence; and, further, that in almost every instance the examination of the patient was made in the presence of other medical men.

In the accompanying tables (p. 645) I have grouped the cases according to the age of the patients at the date of the operation, and it is at once seen that up to middle life the probabilities of a complete and permanent cure are considerable.

As to children under 10 years of age, it is now so generally recognized that a radical cure follows complete removal of the sac that it is unnecessary for me to dwell upon the results obtained in this series, except to draw attention to the mortality, which, I regret to say, has been far too high.

One child, 4 months old, was operated upon in the summer of 1905, and died a week later from diarrhoea.

Another child, 2 years old, died two days after operation from delayed chloroform poisoning.

The third case, a child of 3 months, died suddenly and altogether unexpectedly two days after operation. No definite cause for the child's death could be discovered at the necropsy.

Although these deaths should certainly be attributed to the operation, still I am glad to be able to say that in no case was there anything wrong with the wound.

Method of Operating.

As in the case of the adult patients the operations performed for inguinal, femoral, and umbilical hernia differ in some important respects from those generally adopted, I will describe them under the several varieties of hernia.

Inguinal Hernia.

Everybody is agreed, and for a great many years everybody has been agreed, that it is very important to completely remove the sac, and I have not the least doubt that any and every surgeon who has ever operated for the radical cure of inguinal hernia is perfectly satisfied that he did completely remove the sac. I very much doubt it. This is a matter of very great importance, for I am quite sure that the chief cause of failure after operation is incomplete removal of the sac. In examining patients in whom hernia has recurred I have been at once impressed by the position of the scar. The skin incision had been made far too low—in fact, it encroached upon the scrotum, and did not extend upwards further than the external abdominal ring. Through such an incision it is impossible to excise the sac completely. The lower end of the skin incision should not extend more than ½ in. below the

The After-Results in a Series of Operations for the Radical Cure of Hernia Performed during the Years 1905, 1906, and 1907, considered according to the Age of the Patients at the Date of Operation.

Hernia.	Cases.	Satisfactory 12 Months and More after Operation.	Unaccounted for.	Relapsed.	Died.
Boys and girls under 10 years of age:					
Right inguinal	*71	69	—	—	2
Left inguinal	17	17	—	—	—
Double inguinal	8	7	—	—	1
Umbilical	4	4	—	—	—
Linea alba	2	2	—	—	—
Females under 40 years of age:					
Right inguinal	4	3	1	—	—
Left inguinal	3	3	—	—	—
Double inguinal	1	1	—	—	—
Right femoral	3	3	—	—	—
Left femoral	2	1	1	—	—
Umbilical	1	1	—	—	—
Females over 40 years of age:					
Right inguinal	1	—	1	—	—
Left inguinal	1	1	—	—	—
Right femoral	2	2	—	—	—
Left femoral	2	2	—	—	—
Umbilical	6	6	—	—	—
Males under 40 years of age:					
Right inguinal	33	30	3	—	—
Left inguinal	17	15	2	—	—
Double inguinal	3	3	—	—	—
Right femoral	1	1	—	—	—
Left femoral	2	1	1	—	—
Direct inguinal	1	1	—	—	—
Males over 40 years of age:					
Right inguinal	15	10	2	2	1
Left inguinal	10	8	1	1	—
Double inguinal	4	4	—	—	—
Left femoral	1	1	—	—	—
Direct inguinal	2	2	—	—	—

external abdominal ring. I always open up the inguinal canal for about 1½ in., and, having found and isolated the sac, make a point of pulling it vertically upwards, and at the same time brushing back with gauze the vas and other structures clinging to the neck of the sac. I continue to pull the sac upwards and push back the surrounding structures until I bring into view a marked thickening of the peritoneum. This thickening is to be found on the pubic side. I always look for it, and when it appears know I have reached the limits of the sac. By transfixing and tying the peritoneum through this thickened portion the limits of the sac have been passed, and when it is cut away the ligatured stump at once disappears from view beneath the internal oblique. This thickening of the peritoneum is physiological. It is present during infancy as well as during adult life, and when operating for inguinal hernia should always be looked for, as it is the only true indication the limits of the sac have been reached.

The sac being thus completely removed, I unite the divided aponeurosis of the inguinal canal. Formerly, I did this by overlapping, but more recently I have taken a double hold of the aponeurosis on either side with the needle, and so with four or five stitches narrowed and lengthened the inguinal canal. The cord is not interfered with, and, after tying several small blood vessels, the skin incision is closed.

On the seventh day the subcutaneous wire or stitches are removed, and, as a general rule, the patient is allowed to get up on the tenth day, and leaves the hospital on the fourteenth day, after the operation, not wearing a truss or support of any kind. He is advised not to return to work until at least two more weeks have elapsed. I formerly kept patients in bed for two weeks after operation, but by getting them up sooner I have added to their comfort and in no way retarded their recovery.

Such has been the routine treatment for inguinal hernia, and when it is remembered that my list includes all sorts and conditions of men—some young, healthy, and favourable subjects, others weather-beaten, beer-worn creatures, who for years had a large scrotal hernia containing omentum, it is extremely gratifying to me to find results so satisfactory following upon such a simple method of operating.

I would draw particular attention to the list of men under 40 years of age. Most of them were dock labourers, carters, or sailors, and many had been ruptured for years. From the time of operation they were off duty about six or eight weeks, and since resuming work have remained sound and well, not wearing a truss or support of any kind. It is really very encouraging not to have had a recurrence in any man or woman under 40 years of age; and the fact that this result has been obtained by an operation which aims at little more than the complete removal of the sac, is additional and substantial evidence in favour of the view that the presence of the sac is the essential cause of the hernia. It also emphasizes the point that, provided the whole sac is removed, it is not necessary to spend time and trouble in what is called "strengthening" the abdominal wall by transplanting the cord, or by adopting other more or less complicated measures. In the case of men over 40 years of age exactly the same method of operating was practised, but in such persons a permanent cure cannot be looked for with the same confidence as when the operation is performed earlier in life.

Many of these cases were men over 50 years of age, and would have been considered unfavourable for operation by any surgeon, some of them perhaps altogether unsuitable, owing to the age of the patient, the size of the hernia, and the length of time it had been present. However, the results are, on the whole, satisfactory, in spite of the fact that in three cases the hernia relapsed, and in one case death followed upon the operation.

Of the three cases that relapsed, two were 58 years of age at the time of operation, one suffered from a double scrotal hernia of some years' duration, the other man had a large inguinal hernia, for which he had worn a truss for twenty-nine years. Both these patients now have a distinct bulging at the site of operation, but a truss is worn with much greater comfort than before operation. The third case of failure occurred in a man aged 41, operated upon in 1906. Some months after he left the hospital I heard indirectly that he was in hospital in Singapore on account of a rupture, but I am not quite sure whether it was a relapse or a hernia on the other side.

The case of the man who died was somewhat remarkable:

He was 58 years of age, and operated upon for inguinal hernia. All went well, the wound healed, and the man got up at the end of two weeks, but returned to bed owing to an attack of bronchitis. Four weeks after operation he was to leave the hospital, and was dressing himself when he had a sudden and remarkable seizure and died in a few minutes. At the necropsy no definite cause could be discovered to account for his sudden death.

Though I cannot directly attribute the man's death to the operation, still, as he died in hospital after operation, it is better to consider his death as in some way due to the operation.

Femoral Hernia.

All the cases of femoral hernia were operated upon in the same manner. A skin incision made over the sac and parallel to the fold of the groin exposes almost at once a structure frequently mistaken for the sac. It is not the sac, but a layer of fat concealing it, intimately attached to it, and, being enclosed by a thin fibrous membrane, closely resembles a thin hernia sac containing omentum. It should be thoroughly exposed

and isolated well up to the femoral ring; then, grasping it with one hand, I pull it outwards, at the same time brushing back with gauze the structures surrounding its neck. As a result of this firm but gentle pulling and pushing a marked alteration in the appearance of the fat surrounding the neck or mouth of the sac is noticed. At first it was of a reddish-yellow colour, but now it is pale yellow. This is due to the sac and surrounding fat being pulled outwards and the subperitoneal fat beyond the mouth of the sac exposed to view. I always continue to pull outwards and push backwards until the pale yellow subperitoneal fat is exposed, for the limits of the sac have thus been determined and a suitable level for applying the ligature reached. The fat surrounding the sac is now removed and a ligature applied at as high a level as possible. Nothing further is done except to close the skin incision. Complete removal of the sac, together with the fat surrounding it, is the essential feature of the operation.

I have never practised any of the more elaborate methods recommended for the radical cure of femoral hernia, and if, as would appear to be the case, a permanent cure can be brought about by little more than complete removal of the sac, surely this is strong testimony in favour of the view that in femoral as in inguinal hernia the presence of the sac is the essential cause of the hernia. Dr. A. J. Ochsner has used this method during a period of fourteen years, and is convinced that, barring unusual accidents, recurrence is out of the question provided the operation is properly performed. He has been able to get definite reports and to examine 30 cases of femoral hernia. In no case was there a recurrence.

Umbilical Hernia.

In every case the method of operating first described by W. J. Mayo was adopted. The hernial protrusion is included in two transverse elliptical incisions, clearly exposing the neck of the sac and the aponeurotic structures above and below it for several inches. The sac is then opened at its mouth, and any intestine which may lie in it returned into the abdomen. The contained omentum, usually adherent, is ligatured in sections and returned into the peritoneal cavity. The sac with all the adherent momentum, including the skin, is cut away. The entire thickness of the aponeurotic and peritoneal surfaces are then united by overlapping from above downwards. By adopting this plan the operation for the radical cure of umbilical hernia is much more simple than it used to be when the vertical incision and side to side union was practised and the after-results far more satisfactory than they ever were or could have been after the older methods. The operation is often formidable owing to the size of the hernia and the enormous abdominal girth of the patient. My six cases in women over 40 years of age were all very stout, one patient weighing 18st.

CONCLUSION.

It has often struck me as being somewhat discreditable to the science and art of surgery that for the cure of such a common complaint as inguinal or femoral hernia there should be so many operative procedures differing widely in principle. Clearness of purpose and simplicity in method should be our aim, and if results such as I have the pleasure in recording can be obtained by an operation which essentially and almost entirely consists in the complete removal of the sac, this surely is strong evidence in favour of the sac being the essential cause of the hernia, and is also an encouragement to surgeons to simplify their methods when operating, to pay less attention to repairing the abdominal wall, and more attention to the complete removal of the sac.

THE *Policlinico* has published a first list of members of the medical profession who perished in the earthquake at Messina. Among them are the following: Dr. Gaspare D'Urso, professor of clinical surgery; Dr. Antonio Zincone, professor of anatomy; Dr. Agatino Giovanni Barbera, professor of physiology; Dr. Giovanni Melle, professor of dermatology and syphilis; Dr. Antonio Cambria, lecturer on clinical pathology; Dr. Francesca Ponzio, lecturer on materia medica; and Dr. Carmelo Calderone, lecturer on dermatology and syphilis—all of the University of Messina; Dr. Tullio Mazzei, director of the Antirabic Institute; and Dr. Lorenzo Mandalari, lecturer on mental diseases in the Medical Faculty of Naples.

STRANGULATED HERNIA THROUGH THE FORAMEN OF WINSLOW: OPERATION: RECOVERY.

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THE occurrence of this form of internal hernia is sufficiently rare to justify the publication of the details of a recent successful operation. About 20 cases have hitherto been recorded since the first described by Blandin in 1823. Many of these were only recognized after death, and are therefore of interest mainly in reference to the morbid anatomy of the parts concerned. Seldom has the diagnosis been determined in life before operation as in the present instance, and it may therefore be of interest to state briefly the leading symptoms in this case.

In the example here described the diagnosis of this obscure form of internal hernia was made by Dr. Tate, Surgeon to the County Infirmary, Downpatrick, to whom I am indebted for the description of the earlier symptoms, as well as for his skilful assistance during the operation involved.

The patient was a gentleman aged 58 years, in excellent general health, who had been out shooting the previous day. No other intestinal trouble had ever been experienced, and he was accustomed to have a regular daily evacuation from the bowels.

History of Illness.

He had a sharp turn of coughing on rising on the morning of December 13th, and when shaving shortly afterwards was seized with violent pain in the upper part of the abdomen, the lower part of the chest, and the back. It was colicky and griping in character and radiated into the interscapular region, and there was some retching. An action of the bowels followed at once upon this seizure. This emptied the lower bowel, but without relief to the pain. The patient then took Hunyadi Janos water, without result. Copious turpentine injections and further aperients, including calomel, failed. The constipation was absolute for faeces and flatus. His pulse was 70, and the temperature normal. Vomiting was neither frequent nor severe, being wholly absent on the third day of the illness, but hiccough supervened on that day. There was no rigidity of the abdominal wall and no distension for the first two days, and it could not be said that any definite epigastric swelling existed. On the morning of the operation an ill-defined fullness, free from tenderness, began to show itself in this region. The temperature and pulse at this stage did not exceed 99.50° and 76 respectively. During the paroxysmal exacerbations of the pain, which was referred to the interscapular region and to the lower part of the thorax and epigastrium, the patient found most relief by turning on his face and pressing with his hand on the upper part of the abdomen. There was no pain in the umbilical region or below it at any time.

Operation.

Coeliotomy was performed on the third day, the abdomen being opened by an incision above the umbilicus in the middle line. The margin of the foramen of Winslow tightly constricted the gut, and was treated by gentle dilatation sufficiently to allow the constricted portion to be withdrawn. Two and a half feet of jejunum were withdrawn from the smaller sac of the peritoneum with comparative ease. The annular constriction was sharply defined and almost gangrenous, and the gut felt as if only the outer tunic of the gut remained. It was decided not to excise the damaged portion, but it was brought to the parietal wound and ultimately fixed behind it by two catgut sutures. The free border of the great omentum was carried round it, and fixed by sutures to it, and to the mesentery by several points of suture on either side, thus forming a loose protective sleeve, in order that, if perforation or rupture occurred, the extravasation might happily be retained in an omental compartment opposite the parietal wound. No abdominal complications arose, and the patient was about again within three weeks.

It may be remarked that of the 18 cases collected by Jeanbrau and Riche, coeliotomy was performed in 11 cases, with 4 cures. The same observers, after a series of experiments upon the cadaver, state their belief that the foramen of Winslow can be safely enlarged by an incision made through the peritoneum forming the anterior lamina of the gastro-hepatic omentum at the upper border of the first part of the duodenum (*Keen's Surgery*).

In this case, however, no incision was made, but a cautious dilatation of the foramen was practised with the tip of the little finger.

Certain points seem worthy of emphasis: (1) Notwithstanding the tight constriction, reflex vomiting was not an urgent symptom—which is all the more remarkable, when only $\frac{1}{6}$ grain of morphine was given hypodermically throughout the three days that the strangulation lasted; (2) the pain

in the interscapular region; (3) the instinctive adoption of the prone position, with leaning forward, to relieve the epigastric pain; (4) the absence of pain around the umbilicus and below it.

A CASE IN WHICH ENTEROSPASM WAS A PRONOUNCED FEATURE, NECESSITATING ABDOMINAL SECTION FOUR TIMES WITHIN TEN MONTHS.

By C. W. DEAN, F.R.C.S.E.,
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UNTIL I read Dr. Ashe's most interesting account of his case of enterospasm, in the BRITISH MEDICAL JOURNAL of March 2nd, 1907, I, like him, was ignorant of this condition as a recognized pathological state. As it was, the perusal of his paper and the clear and concise description of the symptoms and of the conditions found at the subsequent operation enabled me some months later to solve, without leaving much room for doubt, what otherwise would have been a difficult problem; and although the treatment adopted in my case of necessity differed from that followed in his, still the picture disclosed in the case I am about to describe at once told me that I was looking at a piece of intestine in a state of tetanic spasm, a sight I had never before beheld.

Since reading Dr. Ashe's paper, Dr. Herbert P. Hawkins has most kindly sent me a reprint of his commentary on The Reality of Enterospasm and its Mimicry of Appendicitis, which appeared in the JOURNAL of January 13th, 1906. This most able paper tells us practically all that is known up to the present time of spasm of the intestine and enteralgia—two conditions which seem to accompany each other in all the recorded cases. In Dr. Hawkins's paper one sentence specially impressed me as being pregnant with truth—how true no one can appreciate until he has been many years in practice; that is, "there is much abdominal pain which has no name and does not kill."

How often has the abdomen been opened for acute symptoms simulating gastric ulcer or obstruction, symptoms which were perhaps not classical, which did not quite fit in as they should with the description given in the textbooks, but which were too alarming apparently to admit of delay, in which laparotomy has been performed, and yet nothing has been found subsequently to justify the operation?

I know this has happened to me, and it must have occurred over and over again in the experience of other surgeons; but cases like these are not recorded—may they not in many instances come under the category of acute enterospasm? I venture to think so.

The notes of the following case may possibly be of some interest, for these reasons: laparotomy was performed four times in less than ten months, a cyst of the ovary was removed at one operation, enterotomy performed at another, 4 in. of small intestine removed at the third, and 7 in. of small bowel were resected at the fourth. The crowning point of the whole thing is that the patient is now in excellent health and expresses herself as "feeling better than she has done for years." On reading this account casually some people may be inclined to think that the aid of surgery may have been invoked perhaps somewhat too hastily, but I can assure them that such has not been the case in this instance.

The late Dr. W. Croft Helme, a man of much experience and knowledge, under whose care the patient was, asked me to see the case with him in consultation to decide as to the advisability of operation. The symptoms on each occasion, in our opinion, presented features of extreme urgency. The final operation, of course, admitted of no delay, being due to the fact that the patient was suffering from acute obstruction. A point I think of much interest is the prominent part enterospasm played in the case, and the fact that the spastic bowel was seen and handled, and its condition deliberately noted, and so adding another instance to those already recorded.

History.

A young woman, aged 29, of a singularly placid disposition, has had three children, of whom two are living; her previous illnesses have been an attack of influenza every year for the past five years. For about four years she has had attacks of what she describes as cramp in the bowels, always attended by vomiting and difficulty of defaecation. These attacks came on at any time without warning, while engaged in household work or while in bed. After the attacks passed off constipation always remained, sometimes for quite a long time. In addition there was constant pain in the left iliac region. In December, 1907, a lump was found in this situation, presumably in the left ovary, but its nature at the time was undetermined; in all probability, however, it accounted for the above-mentioned pain.

First Laparotomy.

On January 1st, 1908, the patient aborted at three months, and as she did not progress satisfactorily she was admitted into the Royal Lancaster Infirmary on January 14th under my late friend and colleague, Dr. W. Croft Helme. After she had been for five weeks under treatment, the tumour getting no smaller (I may say there was a suspicion in Dr. Helme's mind of gonorrhoeal infection of the tube), I was invited to see her in consultation, and we came to the conclusion that we ought to open the abdomen; this we did on February 20th, and removed a rounded dark cyst of the ovary together with the tube, after having had to separate many adhesions. The tumour was examined by Dr. W. Gough, and showed the typical structure of a multilocular cystic adenoma. On the day after the operation she had pain in the abdomen of a severe cramp-like character, accompanied by vomiting and inability to pass flatus; enemata were given, but without any result. Dr. Helme feared the onset of septic peritonitis, but there was little or no distension, no rise of temperature, and the pulse was not unduly quickened; tenderness was general, but not marked, and the patient did not seem poisoned.

Second Laparotomy.

As the symptoms continued all the next day, Dr. Helme again asked me to see her, which I did on February 23rd, and advised reopening the abdomen, the general condition of the patient being so good and there being no sign of toxaemia. We operated in the evening of that day and found absolutely no trace of peritonitis; the site of the previous lesion was healthy, in fact at first sight everything seemed natural, but on examining more closely we found what looked like a piece of collapsed bowel, and on bringing it to the surface it proved to be a portion of the ileum near to its junction with the caecum, about 6 in. long, flattened, with slightly concave sides very like a piece of thin rubber tubing from which the air had been exhausted; each end joined the healthy gut by a sharp line, the spastic portion was paler than the rest of the gut, but beyond this there was no sign of disease, no distension of the upper end of the bowel and no marked congestion. Having read the account of Dr. Ashe's case, I had little difficulty in believing we had a similar condition to contend with. As the patient's state demanded relief and as, unlike Dr. Ashe's case, the bowel could not be induced to relax, I opened the gut just above the contraction. The patient was much relieved and soon recovered perfectly, with the exception of the inconvenience caused by the enterotomy wound, and had no return of the spasm.

Third Laparotomy.

On April 2nd, six weeks after the second operation, we wished to close the opening by a plastic operation, but as the wound had stretched so much this was found to be impossible, so the abdomen was again opened and some 4 in. of bowel removed and the ends joined by simple suture.

From this third operation the patient recovered without a bad symptom, a natural motion being passed on the third day. She remained in hospital until May 16th, when she went home and resumed her household duties. She had some little trouble with a stitch abscess, but beyond that she got on very well. She now tells me, however, that she was never free from a slight feeling of abdominal discomfort.

Fourth Laparotomy.

On December 7th, 1908, she sent for me late in the afternoon (my friend Dr. Helme had died during the previous September) saying she was ill again like she was before. I found her in bed with her legs drawn up, evidently suffering acute pain. She told me she was all right when she got up that morning, and had done her usual work until about 11 a.m., when while mangling some heavy clothes she felt a sudden pain in the abdomen; it had steadily got worse, coming on every now and then in spasms. She had vomited the contents of the stomach, and could not pass flatus. I of course thought of enterospasm as a probable cause of the trouble, but as the symptoms were very severe, and obstruction was evidently pretty complete, I advised her to come into hospital, telling her I might possibly have to open her abdomen again. She came in as soon as she could, and I saw her at 8 p.m. the same evening. The pain was now very severe and paroxysmal, and the whole abdomen exceedingly tender to touch and somewhat distended. She had again been sick, the vomit now being bilious in character, moreover she had not passed flatus in spite of a large enema containing turpentine. I determined to operate at once, and with the assistance of Dr. Parker I for the fourth time opened her abdomen. The cause of the mischief was at once found—a loop of small intestine was tightly strangulated by an adhesion which had formed after one of the previous operations; the loop was quite black, and had lost its lustre in places (distinct evidence of commencing gangrene can now be seen in the bottled specimen). So for the second time within ten months I resected a portion of her bowel, this time about 7 inches, and united the ends by simple suture. From this operation she has perfectly recovered, as far as one can see. She declares she is quite well, and looks so; moreover, she has lost the feeling of discomfort she previously had.

THE DIAGNOSIS AND TREATMENT OF CHRONIC ULCER OF THE STOMACH AND DUODENUM.*

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NOTWITHSTANDING the number and excellence of the articles that have been written on this subject during the last few years, it does not seem that the profession as a whole has realized the practical importance of these affections, nor has it acquired the knowledge regarding them like that which it has attained, for example, in the diagnosis of lesions of the vermiform appendix. The difficulties are undoubtedly greater; when the appendix is diseased, it is always appendicitis in one form or another; when, on the other hand, there is a chronic affection of the stomach, there is a much wider field for mistakes, and a greater refinement of diagnosis is called for.

My contribution to the subject is the report of a consecutive series of 50 cases in which a chronic ulcer of the stomach or duodenum was not only diagnosed by clinical methods, but was demonstrated to those present at the operation undertaken for its relief. I may be said, therefore, to be speaking of facts and not of inferences.

The Site of the Ulcer.

The ulcer was situated in the pyloric ring or antrum in 16 (32 per cent.), on the lesser curvature in 12 (24 per cent.), and in the first part of the duodenum in 17 (34 per cent.). In the remaining 5 cases (10 per cent.) there was more than one ulcer, one of these being situated in the duodenum in all of them. This gives a total of 22 ulcers in the duodenum and 28 in the stomach. Bearing in mind that the so-called anterior wall of the pylorus and duodenum is really the right lateral wall, and that with which the acid contents of the stomach are first brought into contact, it is very striking that it is almost invariably the seat of the ulcer. It is true that ulcers on the posterior wall are more likely to escape recognition by the surgeon, because he is unwilling to extend or prolong the preliminary manipulations, but I am confident that the true proportion of anterior ulcers would be something like 95 per cent. When the ulcer is diffuse or affects both walls, the evidence goes to show that the disease commenced in the anterior wall. Ulcers of the lesser curvature specially tend to affect both walls, acquiring the saddle-shape first described by Mayo.

Sex.

There were 30 males (60 per cent.) and 20 females (40 per cent.). Ulcers affecting the stomach alone were equally divided between the sexes; the duodenal ulcers were distributed in the proportion of 18 males to 4 females.

Age.

The range was from 21 to 67 years, the average being 41; the age of the duodenal cases ranged from 25 to 67 years, with an average of 43. If the ages are corrected according to when the symptoms first appeared, the average age for the onset of gastric ulcer is 32 and for duodenal ulcer 38.

Duration and Remission of Symptoms.

The duration of the ulcer cannot always be determined with certainty, as in many cases there is an indefinite period of what is called ill health with indigestion before the onset of symptoms which may be regarded as due to ulcer. In the majority of cases there are periods of remission of weeks, months, and sometimes of years, during which the patient is actually or comparatively free from symptoms. These remissions are most marked in the cases of duodenal ulcer, and are sometimes quite as striking as those so commonly observed in affections of the gall bladder. The remissions tend to become shorter, and in many cases prior to application for treatment the suffering is practically constant.

Pain.

In 3 cases (6 per cent.) there was *no pain;* in one of these the ulcer involved the lesser curvature, the other two the duodenum, but in all of them the ulcer was small, with little or no induration and a smooth peritoneal scar on the surface. In 3 cases there was *little or no pain*, and all of these involved the duodenum. In 8 cases there was more or less *constant pain*, and no less than 7 of these involved the lesser curvature; in all of them there was very extensive induration around the ulcer, and adhesions to the left lobe of the liver or to the anterior abdominal wall, and in 4 of them there was an hour-glass contraction. In 1 case in which the ulcer was located in the duodenum the pain occurred in definite seizures at intervals of about five days; these seizures closely resembled biliary colic, and necessitated the patient being put to bed with hot bottles and the exhibition of opiates.

Seat of the Pain.—The pain is almost invariably referred to the vicinity of the middle line, and frequently passes through to the back between the shoulders. It may be stated generally that in ulcer of the lesser curvature the pain is to the left of the xyphoid or below the left costal margin; in ulcer at or near the pyloric ring the pain is in the middle line; in ulcer of the duodenum the pain is to the right of the xyphoid or below or over the right costal margin. One cannot rely upon any particular case conforming to these general rules. I have observed patients with left-sided pain and found at the operation that the ulcer was situated in the duodenum, and conversely I have seen patients with right-sided pain and yet operation disclosed an ulcer in the vicinity of the pyloric ring.

Relation of Pain to the Taking of Food.—In 10 cases pain was relieved by the taking of food. In some cases this amounted to the well-known hunger-pain; in 6 of the 10 cases the ulcer was situated in the duodenum. Pain following the taking of food was complained of in 4 cases in which the ulcer was situated in the lesser curvature, and in these the pain occurred from half an hour to an hour after food; in 11 cases in which the ulcer affected the pyloric ring and antrum the pain occurred from one to two hours after the taking of food, and in 9 cases in which the ulcer was situated in the duodenum the pain occurred later than two hours after food, and in 1 case four hours after food. In the case of multiple ulcers the pain sequence is apt to be confusing. In the hour-glass cases the pain corresponds to that of an ulcer of the lesser curvature; it comes on soon after food, is apt to be constant, and is referred to the left side. Several patients, and more particularly those who were the subject of duodenal ulcer, were quite decided in saying that the nature of the diet had no influence on their symptoms. One intelligent man, for example, affirmed that he suffered just as much when he was on a restricted diet as when he took lobster salad and other supposed indigestible foods. In gastric ulcer, on the other hand, the nature of the diet has a considerable influence on the amount of suffering, and the majority volunteered that their symptoms were aggravated when this included butcher meat and potatoes. In cases of pyloric obstruction with butyric and lactic acid fermentation the diet naturally makes a great difference. It was quite the exception to be able to bring out any relationship between the attitude of the patient and the pain, such as would help in locating the ulcer. I should not diagnose an ulcer to be seated in the posterior wall because the patient obtained relief from lying on his face. The site of the ulcer is not to be inferred from any one symptom, but from all the features of the case. The onset of pain in the evening or during the night was a striking feature in at least 7 cases (14 per cent.). In 1 of these the ulcer was in the lesser curvature, in 4 at or near the pylorus, and in 3 in the duodenum. The night pain in the duodenal cases is a variety of hunger-pain; in the pyloric cases it was usually associated with stenosis and distension of the stomach and the accumulation and decomposition of the food taken during the day. If the patient vomited, either spontaneously or by putting his fingers down the throat, the pain was relieved and the patient was able to go to sleep again.

Tenderness in the epigastrium or over the lower ribs was observed in 16 cases (32 per cent.), and in the majority of these the ulcer was situated near the pylorus or lesser curvature. This association would appear to depend on the greater frequency with which gastric ulcer, in contrast to duodenal ulcer, leads to the formation of adhesions between the area of the ulcer and the parietal

* Read at a meeting of the Medico-Chirurgical Society of Edinburgh, March 3rd, 1909.

peritoneum. In the whole series of duodenal ulcers there were only two in which there was marked tenderness, and in both there were extensive adhesions to the under surface of the liver and to the parietal peritoneum. Along with the tenderness there is often rigidity of the corresponding rectus muscle.

The Causation of the Pain in Chronic Ulcer.

The pain of gastric or duodenal ulcer is usually ascribed to the contact of the acid contents of the stomach with the raw surface of the ulcer. I believe that hyperacidity is one of the essential factors in the production of an ulcer, but I do not believe it is the cause of the pain. When food is swallowed gastric juice is secreted at once, and therefore in an ulcer situated at the lesser curvature this should be at once exposed to its action, and pain ought to follow immediately. It is the interval which is difficult to account for. I believe that the pain is due to the movements of that part of the stomach in which the ulcer is situated—that is to say, the pain is due to peristalsis and not to contact of acid with the raw surface. We know that the exaggerated peristalsis which is visible through the abdominal wall is always associated with pain, and there can be no doubt of the influence of the taking of food in the production of peristaltic movements.

If pain were the result of contact with the acid contents of the stomach, one would expect that the recent acute ulcer with a raw surface and little infiltration of its base and margins would react most; so far as I can learn, this ulcer is usually insensitive. The ulcer which causes the greatest amount of pain is the chronic ulcer with widespread callous infiltration and peritoneal adhesions, precisely the type of lesion that would most interfere with the peristaltic movements of the organ.

In four of my cases the test-meal showed the complete absence of free hydrochloric acid, and yet in all of these pain was a prominent feature, another proof that the pain of ulcer is due to the movements of the viscus and not to the acidity of its contents.

The violent crises of pain which occur at irregular intervals in some cases of duodenal ulcer cannot be related to contact with acid contents; they are much more likely to be due to cramp-like contractions of the wall of the duodenum.

The explanation of the hunger-pain of duodenal ulcer is more difficult. It is usually accepted that the pain of fasting is relieved by the taking of food, because this is followed by the shutting of the pylorus and the arrest of the passage of acid material into the duodenum. This has always appeared to me a fanciful explanation. It presupposes that during fasting acid material is passed into the first portion of the duodenum, which is obviously not the case. Is it not rather that as the stomach empties the pylorus tends to move towards or even to the left of the middle line, thus putting traction on the duodenum, and when it is the seat of an ulcer, there is pain or at any rate a feeling of discomfort, which is relieved by the ingestion of food? Similarly, when a stomach with an anterior ulcer and with adhesions to the parietal peritoneum becomes distended, whether from accumulation of food or of products of decomposition, pain or extreme discomfort is brought about, because the stomach is displaced downwards and to the right; thus traction is made upon the indurated portion and upon any adhesions which may be present.

Vomiting.

This was present in 42 cases (84 per cent.), and therefore, next to pain, is the most constant symptom of ulcer. In 4 it was occasional; in the great majority it was a prominent feature. It is more constant in gastric than in duodenal ulcer, and attains its acme in ulcer at the pylorus with narrowing of the outlet. In these it is usually cumulative, the patient vomiting at night what has been ingested during the day. It is important to bear in mind that vomiting may be absent; in the present series there were six patients with uncomplicated duodenal ulcer who never vomited. It is more noteworthy that vomiting was absent in two cases of ulcer of the lesser curvature; in one of these there was a large, saddle-shaped ulcer with marked hour-glass contraction.

Haemorrhage.

In 29 cases (58 per cent.) there was haematemesis, and in 11 of these there was also haemorrhage from the bowel. In 15 cases the patient vomited pure blood, and in 13 coffee grounds; 1 patient vomited blood and coffee grounds on different occasions. My records show that haemorrhage is most frequent in ulcers at or near the pylorus—13 out of 16 (81¼ per cent.)—while only one of these had melaena. It is next most frequent in duodenal ulcers—10 out of 17 (59 per cent.)—and it is in these that we have the highest percentage of haemorrhages from the bowel; there is therefore abundant corroboration of the current view that the combination of haematemesis and melaena is strongly suggestive of the ulcer being situated in the duodenum. Haemorrhage was less frequent in ulcers of the lesser curvature—5 out of 12—and in 2 of these there was melaena.

Test Meal.

This was carried out as a routine measure. The gastric contents showed the presence of free HCl, usually to excess, in all of the series except four. These four cases, therefore, merit special consideration; in all of them the ulcer was situated in the lesser curvature. In one case there was also an ulcer of the duodenum, and in one of them there was an hour-glass contraction of the stomach. In two of these cases the provisional diagnosis of carcinoma was made, and in the then state of our knowledge (1906) this sufficed to turn the scale in determining me to resect the affected portion of stomach, with the unfortunate sequel that one of the patients succumbed to what turned out to be a formidable operation, much more difficult than the average resection for cancer. In each of these cases microscopical examination showed the lesion to be a chronic ulcer and nothing more. In the third case the infiltration of the first part of the duodenum was so extensive that, in view of the absence of free HCl and the presence of lactic and butyric acids, one would have been inclined to regard the condition as malignant were it not that the discovery of a second area of induration in the lesser curvature presenting the typical crater of an ulcer to the fingers, turned the scale against the diagnosis of cancer, and enabled cure to be brought about by a simple gastro-enterostomy. The fourth case was one of hour-glass contraction of the stomach, and, in spite of the absence of free HCl and the presence of butyric and lactic acids, there was no doubt of the innocence of the condition, and a complete disappearance of the symptoms was obtained by anastomosing the larger proximal sac with the jejunum.

The presence of butyric and lactic acids along with free HCl is not of much significance. It is merely an indication of the stasis of the gastric contents, and does not support in any way the diagnosis of cancer. This combination was noticed in 2 cases of pyloric ulcer, in 1 hour-glass stomach with saddle ulcer of the lesser curvature, and in 4 cases of ulcer of the duodenum.

Constipation.

This is almost universal throughout the series; there are only three in which the notes record that the bowels moved every day without medicine. It was naturally much more marked in the cases with pyloric stenosis, but it occurs with sufficient frequency apart from any obstruction of the lumen to warrant the inference that the mere presence of an ulcer in the stomach or duodenum interferes with the onward propulsion of the ingesta.

Visible Peristalsis.

This was only observed in 5 cases—4 of pyloric ulcer and 1 of the duodenum. It affords a reliable guide to the degree of mechanical narrowing of the lumen brought about by the ulcer, and is to be regarded as a favourable indication from the operative point of view, as the hypertrophy of the muscular coat of the stomach with which it is associated enables the patient to derive the maximum advantage from a gastro-enterostomy.

The condition of the stomach as revealed by physical examination, distension with air, and other methods, was of service in affording information as to the shape, size, and position of the stomach, but it was only of indirect service in establishing the existence of ulcer, or its position when diagnosed.

The Diagnosis of Chronic Ulcer of the Stomach and Duodenum.

Enough has been said under the heads of the individual symptoms and signs to make it evident that in the great

majority of cases the diagnosis can be made with a reasonable approach to accuracy. There will always remain, however, a minority—and this will probably increase as patients apply for treatment at an earlier stage of the malady—in which the clinical diagnosis will be attended with uncertainty.

A *gastric neurosis*, or a gastric form of neurasthenia, which is met with in both sexes, but especially in women, is one of the affections most likely to be mistaken for chronic ulcer. The difficulty is more likely to occur in the exceptional cases, to which reference has already been made, in which there is no history of vomiting, and in which the pain is both indefinite in character and in location. This, which may be termed the latent duodenal ulcer, is particularly difficult to diagnose, and the records show that several of the cases in which I have operated and found a duodenal ulcer had been previously under treatment for neurasthenia. The risk of confusing duodenal ulcer with an affection of the gall bladder is well known, but the difficulty is usually cleared up under observation, especially by any one who is experienced in both maladies; and, in any case, in either affection a recourse to laparotomy would not be out of place.

Carcinoma of the stomach is not only liable to be mistaken for ulcer clinically, especially ulcer cases in which the test meal reveals the absence of free HCl, but also when the abdomen has been opened and the parts inspected. On looking back I think one is justified in saying that carcinoma, when present, is unmistakable. On the other hand, one is often inclined to look upon ulcer cases as malignant. One is helped in these doubtful cases when there are two apparent tumours, for these are much more likely to be ulcers than cancer. One is also helped if the duodenum is implicated in the tumour, as in gastric carcinoma this is very exceptional.

Carcinoma in the vicinity of the stomach—for example, one in the head of the pancreas—may project forwards and involve the duodenum or pylorus in such a way as to give the impression of a primary growth in one or other of these situations, and as there may be an absence of free HCl in these cases, the correct interpretation of the conditions found at the operation may be very difficult.

The Hour-glass Cases.

In my experience, hour-glass contraction is the most elusive of all the manifestations of gastric ulcer. The four examples in the present series of cases were met with in middle-aged women (38 to 49 years), who had over a period ranging from twelve months to twenty years presented the clinical features of an ulcer situated in the lesser curvature. The hour-glass constriction was only once diagnosed before operation. In this case there was peristalsis of the wall of the pyloric pouch, and the circumscribed, dome-shaped swelling thus formed was obviously too small to correspond to the whole stomach. In the second example an hour-glass contraction was considered and negatived because none of the recognized tests could be elicited; at the operation it was found that the isthmus had been drawn up behind the ensiform cartilage, and that the pyloric chamber did not even attain the size of a golf-ball. In the third and fourth examples the condition was not suspected before operation, chiefly because of the misleading histories given by the patients. It is noteworthy that one of them, a woman aged 49, had had attacks of colic-like pain in the upper and left region of the abdomen for a period of twelve months, and had never once vomited; and yet at the operation the pyloric chamber was found to be fused with the liver, the pancreas, and anterior abdominal wall, and the lesser curvature was the seat of a saddle-shaped ulcer.

Treatment of Chronic Gastric and Duodenal Ulcer.

Whatever difference of opinion may exist with regard to the treatment of the recent or acute ulcer, I expect we shall be unanimous in the opinion that the chronic ulcer can only be cured by surgical means. The histories of our cases furnish the basis for this opinion. Time, the important factor in so many cures, is apparently powerless in a chronic ulcer, judging by the periods of fifteen, twenty, and even thirty years some of the patients have suffered before they come to operation.

Restricted diet and lavage relieve the prominent symptoms for a time and give the ulcer a chance of healing, which, however, it is apparently rarely, if ever, able to take advantage of. Many of our cases have been dieted and washed out for many years, and the ulcer, when seen at operation, appears as firmly established as ever.

Our reasons for recommending operation are, shortly, as follows: Because the ulcer will not get well otherwise; because the ulcer and its complications are the cause of considerable suffering, and prevent the patient from earning a living; and because the ulcer may become dangerous to life through starvation, haemorrhage, perforation, or transformation into cancer.

The choice of operation lies between resection and gastro-enterostomy. The sphere of *resection* is very limited; it is often impossible—as, for example, in the diffuse ulcers of the duodenum. It is nearly always difficult, and is by no means free from danger. The resection may bring about narrowing of the lumen, and necessitate a gastro-enterostomy in addition; and, finally, as pointed out by Mayo, it does not get rid of the hyperacidity of the stomach contents, which is an essential factor in the production of the disease, so that, unless a gastro-enterostomy is added, there is the risk of the formation of a fresh ulcer in the future. The claim of those who advocate resection as the routine measure where feasible—Rydigier being one of the best known of them—is that if the ulcer is allowed to remain the risk of its becoming cancerous is considerable. So far as my own experience is concerned, this undesirable sequel has only happened once in 47 cases subjected to gastro-enterostomy. Gastro-enterostomy was performed on September 6th, 1904, for a chronic ulcer near the pylorus. When seen sixteen months later the patient was going downhill; free HCl had disappeared from the gastric contents, and an exploratory operation revealed cancer both in the stomach and in the liver. Personally I should not be influenced by the unfortunate sequel in this case to extend the sphere of resection, and that for the reasons already stated.

RESULTS OF OPERATION IN 50 CONSECUTIVE CASES OF CHRONIC ULCER.

Resections of Stomach.

Three cases with one operation death. Of the survivors, one is perfectly well three and a quarter years later: the remaining one is well two and a third years later, but has occasional pain and flatulence.

Gastro-enterostomies.

Forty-seven cases with three operation deaths = a mortality of $6\frac{2}{3}$ per cent. The deaths occurred in the early members of the series, before the technique of the operation was established. Two were due to a bad form of vicious circle and one to septic peritonitis.

Of those who survived the operation, 1, a tramp, was lost sight of; 5 died at various periods—1 of exophthalmic goitre, 1 of cancer of the stomach, already referred to, 1 of urinary sepsis associated with enlarged prostate, and 2 of what was reported by their doctors as acute enteritis. It is just possible that this may have been perforation of a peptic ulcer of the jejunum.

The remaining 38 are all under observation, and I am very greatly indebted to their doctors for the reports with which they have been good enough to furnish me on the subsequent history of these patients and their present condition. With a few exceptions to be mentioned presently, they all described in enthusiastic terms the benefits derived from the operation; there is an increase of weight, and in individual cases this amounted to 2, 3, and even 4 st.; there is complete freedom from the pre-existing gastric symptoms, a healthy appetite, a capacity of eating and enjoying everything, and, finally, a regular action of the bowels without medicines. There was no discoverable difference in the results, whether the operation had been performed for ulcer of the lesser curvature, for ulcer at or near the pylorus, or for ulcer in the duodenum. Even cases with extensive adhesions and the 4 cases of hour-glass stomach all fall to be included in this group of ideal results. Three of the women have since borne children; there was only a moderate amount of sickness during the later months of pregnancy. One of the male patients passed easily through an attack of typhoid fever.

In a proportion of the cases the gastric functions have been subsequently tested, in some cases years after the

operation. In those in which the stomach was previously dilated it was found to have returned to the normal, or nearly the normal size. If the stomach tube was passed from one to three hours after a meal, the food contents were found to be still present in the stomach, showing that the gastro-enterostomy opening behaves in the same way as the normal pylorus. The contents were usually found to be neutral in reaction, and showed traces of bile constituents, usually bile salts. If the tube is passed in the fasting condition, a small amount of bile-stained mucus is usually evacuated.

The exceptions to the above ideal results are comparatively unimportant; one, for example, has a ventral hernia, one is still a little anaemic, one has fullness after meals, one suffers from flatulence and occasional attacks of bile (the earliest operation case in the series), and one has a feeling of distension, and his gastric contents after a test meal show butyric acid and the absence of free HCl.

I beg to record my sincere indebtedness to my medical colleagues on the staff of the infirmary, and particularly to Dr. Francis Boyd, for their invaluable co-operation in the clinical examination of the cases here recorded.

PRIMARY DIFFUSE PNEUMOCOCCIC PERITONITIS: TREATMENT BY DRAINAGE AND PNEUMOCOCCIC VACCINE: RECOVERY.

By H. BETHAM ROBINSON, M.S.Lond., F.R.C.S.,

SURGEON TO ST. THOMAS'S HOSPITAL; CONSULTING SURGEON TO THE EAST LONDON HOSPITAL FOR CHILDREN, ETC.

Not many years ago pneumococcic peritonitis was an unrecognized disease, but of later years the attention of the profession has been drawn to its occurrence through the writings of Jensen, von Brunn, and others on the Continent, and by the paper of Annand and Bowen in particular in this country.

The comparatively limited number of cases so far recorded, and the uncertain recognition of the disease, call for the publication of any further experience. I therefore offer the following contribution, which was a case of diffuse and primary pneumococcic peritonitis with an acute onset simulating perforation of the appendix.

Dorothy W., aged 8, was admitted into the hospital on the evening of April 22nd, 1908, under the care of my colleague, Dr. Sharkey, and was transferred to me the next morning.

Personal and Family History.

The father was said to suffer from some chest trouble, and there was a history of tubercle in the mother's family.

She had always been a nervous child, subject to bilious attacks. Three years before she had had measles, and two years before influenza with symptoms very similar to those of the present illness, abdominal pain and vomiting. From the previous November to February she was kept from school on account of her eyes and headache. She had many times complained of abdominal pain, which was generally relieved by micturition; she had rather a habit of holding her water.

History of Illness.

On the day before admission she had been seemingly in perfect health. At 8.30 a.m. on the 22nd she was suddenly taken ill with free vomiting, faintness, and slight abdominal pain centred round the umbilicus; she was very thirsty and feverish. In the evening, fifteen hours after the onset, she was admitted looking ill and complaining of severe abdominal pain and vomiting. The face was very flushed, the eyes bright but not sunken, and the tongue furred generally but rather dry at the tip. The pulse was 130, regular and of small volume; temperature 103.8°, and respirations 36. The chest moved well and equally, and there were no abnormal physical signs detected in heart or lungs. Abdominal movement was restricted but not absent, especially below the umbilicus; there was definite distension, but it was everywhere resonant. Palpation proved an almost universal tenderness, more marked round the umbilicus and in the right lower quadrant; here there was some increased resistance, but no distinct lump could be felt. There was no alteration in the position or size of the liver; the spleen and kidneys seemed normal, and the urine was unaltered except for an increase of urates. Per rectum there was a boggy feeling, especially on the right side, as if there was something in Douglas's pouch.

I was asked to see the child at 11 next morning, her pulse then being 150 and temperature 103.4°. The abdomen moved fairly well on respiration except on the right side below; here and across the bladder region she was tender. There was a little rigidity over the right rectus both below and above the umbilicus. An immediate operation was decided on, as her condition suggested a perforative peritonitis dependent probably on a gangrenous appendix.

Operation.

A vertical incision was made over the right rectus below the umbilicus, opening the sheath and displacing the muscle inwards. On opening the peritoneum a greenish-yellow fluid escaped, of gummy consistency, with a few flakes of dirty-white lymph in it. Although this was generally diffused through the cavity, and the intestines and omentum were smeared over with it, yet they did not otherwise appear to be in any way altered from the normal; the appendix was absolutely healthy. A good deal of fluid had collected in the pelvis and in the right kidney pouch. There was no sign anywhere of glueing together of the intestinal coils by early adhesions. The right Fallopian tube was very definitely injected. (Subsequent inquiry elicited no evidence, past or present, of any vulval or vaginal discharge.) The glands along the iliac vessels and at the bifurcation of the aorta appeared to be a little enlarged. The peritoneal fluid was quite odourless. Drains with wicks were placed down into the pelvis and up into the kidney pouch, and the main part of the wound was closed in layers. She stood the operation very well, and was put back to bed in the Fowler position, and given $\frac{1}{75}$ grain of morphine. Saline was ordered per rectum.

After-History.

After the operation there was a gentle drop in the temperature to 99° at 8 o'clock the next morning, with a corresponding marked reduction in the pulse-rate. She was feeling much more comfortable, and there had been very little pain and no vomiting. She was given milk and water frequently in small quantities. On April 25th her condition was very satisfactory, but both pulse and temperature had again risen a little. As her bowels had not acted, she was put on magnesium sulphate in the evening. The next morning there was a very slight result after an enema. The wicks were removed from the tubes, and a considerable discharge of turbid fluid came away. Calomel, 2 grains, given at night, followed by magnesium sulphate in the morning; this resulted in four actions during the day. On this day (April 27th) the temperature again began to go up, and, as the clinical report showed that the peritoneal effusion was a pure culture of the pneumococcus, it was decided to use pneumococcic vaccine (see chart). Beyond the variations in pulse and temperature there is now not much to report except her steady progress. On May 5th both drainage tubes were removed and gauze drains substituted. On the 6th, as on removing the gauze a fair amount of pus could be pressed up from the lower abdomen, Bier's cupping for ten minutes was started; this soon produced a marked diminution in the amount of discharge. This, however, did not cease altogether, and apparently came up from the loin, so on May 27th a counter-opening was made here and a piece of gauze pulled through from front to back. This soon had a marked effect both on the discharge and the temperature. On June 6th the front wounds were healed, and on the 10th the drain was left out behind. By this date her temperature had been normal for a week, and she was beginning to get up. She was able to leave the hospital on June 15th.

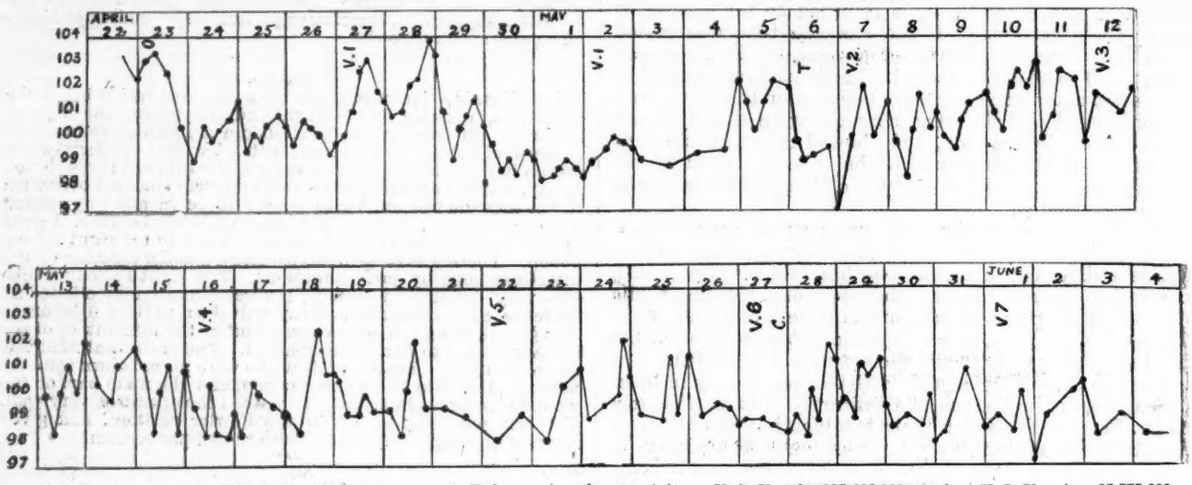
She was readmitted in capital health on October 19th to have a small ventral hernia through the drainage hole dealt with. Some adherent omentum was set free, the peritoneal bulging cut out, and the freshened fascia brought together in layers. She went out on November 5th with a sound scar.

The clinical types of this disease vary as to whether the peritoneal effusion becomes localized or is diffuse. The localized form starts with acute symptoms, and tends to become chronic; at the same time there is walling-in of the effusion, which usually occurs in the lower abdomen in the region of the umbilicus. This is the type of case which in the past was probably considered to be a tuberculous abscess, and, pointing at the umbilicus, ultimately burst or was intentionally opened, with in many instances recovery.

In the diffuse form the symptoms are more markedly acute and remain so, and the signs those of a generalized peritonitis. Jensen and others have commented on the similarity of the onset to acute perforative peritonitis dependent on the appendix, and this case is another example of such.

These clinical forms of peritoneal involvement are found again, whether the peritoneum is primarily or secondarily affected. In a large number it is secondarily implicated, the primary lesion being most often a pneumonia, or a throat or ear lesion, or a pneumococcal abscess elsewhere; the blood infection from these foci is responsible for the subsequent peritonitis.

In the primary cases of peritonitis the possible origin may be traced in a few cases to an appendicitis or to an enteritis, the initial intestinal symptoms, especially diarrhoea, supporting the latter; neither of these causes appeared to be responsible in this case. As stated before, there was in this patient very great congestion



O, Operation. V. 1, Vaccine 11,600,000 cocci. T, Tubes out; plugs put in. V. 2, Vaccine 15,400,000 cocci. V. 3, Vaccine 23,375,000 cocci. V. 4, Vaccine 20,000,000 cocci. V. 5, Vaccine 17,000,000 cocci. V. 6, Vaccine 12,000,000 cocci. C., Counter opening in loin. V. 7, Vaccine 15,000,000 cocci.

of the right Fallopian tube, in marked contrast to the surrounding peritoneum. It has been thought that the infection may ascend from below, but here there had never been observed, nor was there present, any vulvo-vaginal discharge. A point that has been urged in favour of this possibility of origin is the curiously undue proportion of cases in females, but this excess is regarded by most as only accidental. The most accepted explanation, however, is that, as in the former group, the infection comes from the blood, and this is infected by absorption from a mucous surface without any discoverable lesion. No further pneumococcal lesion was found in this case, nor was the blood examined for organisms.

The symptoms of onset agreed with those described by previous observers. In a child of apparent good health there was a history of sudden severe abdominal pain, free vomiting, but no diarrhoea, with rapid development of peritoneal signs. The localizing of the pain, first about the umbilicus and then in the right lower quadrant with the most marked tenderness and some rigidity in the same region, seemed to point to the appendix as the probable source of the trouble; in fact, it is difficult to see how one could exclude this view, bearing in mind the many cases seen of a severe first attack and where there had been previously no warning that the appendix was not healthy. In this child there was some previous history of abdominal pain and vomiting, suggesting appendix trouble.

The character of the peritoneal fluid at the operation was quite distinctive; it was odourless and of a yellowish-green colour, of gummy consistency, and with a limited number of greyish-white flakes of fibrinous coagula in it. The fluid was very little turbid, and this is explained by the early period at which the operation was performed; it later became typically purulent, but remained odourless throughout.

The treatment employed was by incision and drainage. Whether it would have been wiser, after mopping out the fluid, to have closed the cavity, as recommended by some, must remain unanswered; there are not sufficient recorded observations to support one view or the other. It may certainly be urged that the closed cavity runs little or no risk of staphylococcic contamination from outside, which is very likely to occur, and did do so in this case. If the fluid should re-collect, or circumstances should otherwise determine it, the wound could be easily opened again and then drained. In another early case I shall be disposed to adopt this line of action.

With the advice and assistance of Dr. Dudgeon, pneumococcic vaccine was employed in the treatment of the case, which was considered a favourable one for such a course. It was started on the fifth day after operation, when, after an initial reduction of pulse, temperature, and symptoms, there was a marked increase again of the pulse and temperature. The injections, eight in all, were given in increasing doses (see chart), at intervals of five or six days. The satisfactory influence of the first two is well shown in the chart; after that the pus became contaminated, and it was from this cause that the well-marked rises of temperature occurred, masking the effect of the vaccine. On counter-drainage in the loin the temperature rapidly subsided, and she made a speedy recovery. It must be considered, I think, that the use of vaccine contributed in a large degree to the successful issue of the case.

INCISIONS FOR OPERATIONS ON THE UPPER ABDOMINAL ORGANS.

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SURGEON TO AND LECTURER ON CLINICAL SURGERY IN THE ROYAL INFIRMARY, DUNDEE.

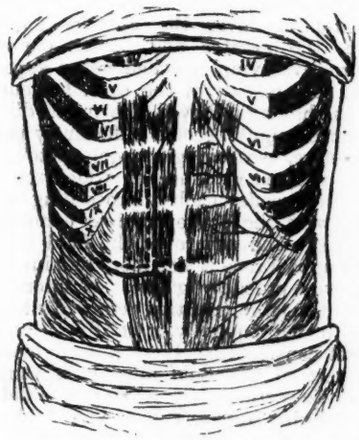
THE incisions practised for operations in the upper abdominal organs are numerous, which indicates that none of them are entirely satisfactory. Kocher's and Mayo-Robson's are the most used in this country, and those described by Bevan, Kehr, and Czerny less frequently. The first three have the merit of giving very free access to the biliary apparatus, the duodenum, the pylorus, and the head of the pancreas, while similar incisions on the left side are available for gastric, splenic, and pancreatic operations. The objection to these incisions is that they cut off the nerve supply of the whole upper half of the rectus and overlying skin. A central quadrilateral area undergoes atrophy in consequence. The family doctor knows best that this is no imaginary sequel. It would be of little moment were the patients to remain invalids, but to an active man or woman the injury is serious. Hernia is not common, but the anaesthesia of the skin leads to abrasions, ulcerations, and other injuries, which are more serious from their being less painful, and therefore liable for a time to escape notice and treatment. Kehr's incision leaves a part of the rectus intact, and is in this respect an improvement on the others, but he cuts off more of the blood supply, while Czerny's merely produces another fibrous intersection in the rectus, and leaves a weak median scar.

The following incisions have no doubt been often employed by others, and there seems nothing against their universal adoption. They are anatomically correct, give ample room, and, when healed, produce a firm cicatrix. The blood and nerve supply is intact, the only vessel severed being the deep epigastric artery near its anastomosis with the internal mammary.

The first incision through the rectus is used by most surgeons for exploratory laparotomies. The skin and anterior sheath are divided a fingerbreadth to the right or left of the middle line from opposite the seventh costo-chondral junction to the umbilicus. The sheath is dissected off the muscle on the inner side, and the muscle freed by blunt dissection from its posterior sheath, and retracted outwards as far as possible. The posterior sheath and peritoneum are then incised as far out as

convenient, and parallel to the whole length of the skin incision. Through this opening the whole of the upper abdomen can be explored, and if operation on lateral organs is deemed advisable, the horizontal limb is then added. The best point for dividing the rectus is at its umbilical intersection, but it may be divided anywhere. This intersection is readily exposed by prolonging the vertical incision if necessary, and from the lower end of this a curved incision is made upwards and outwards to the lowest part of the costal margin. This divides skin and superficial fascia only. The muscle with the skin and anterior sheath is now raised up with the left hand, and the whole cut straight outwards through the middle of the fibrous intersection till the whole thickness of the rectus is divided. The deep epigastric, or a branch, may bleed and require securing. The posterior sheath is divided ½ in. higher up for ease in suturing later.

In very fat subjects the ends of the skin incisions are prolonged and gradually shallowed out at their ends. This gives considerably more room, and does not weaken the cicatrix in the least. When turned up the base of this flap lies along Kocher's incision. The costal cartilages can be cut from the peritoneal side if necessary for operations on the spleen or cardiac end of the stomach. With the sandbag under the patient excellent exposure is got, and the edges of the opening are not too rigid. Only one



The thick line indicates incisions in skin; the dotted line, incisions in posterior sheath and peritoneum; the fine lines, prolongations of skin cuts for stout people; the shading shows ribs, cartilages, nerves, and muscles. (Diagrammatic.)

retractor is required, and when the liver and gall bladder are rotated upwards this, too, may be dispensed with. There is thus no danger of damage to the organs. This sickle-shaped wound is closed in layers with silk, cotton, or celluloid thread as follows: The sandbag is removed, and the vertical peritoneum together with the posterior sheath is closed first. Efficient drainage may be secured through the upper end of the lateral wound before the peritoneum and transversalis fascia are brought together. When the inner end is reached the rectus is sutured at the fibrous intersection, where the suture holds well. The anterior sheath is made to overlap a little, and the fibres of the external and internal oblique and transversalis muscles are gently approximated. The skin is closed by celluloid thread or Meckel's clips.

A more perfect cicatrix can hardly be obtained, and hernia need not be feared. Bevan speaks of the possibility of necrosis at the angle, but in my own cases the union has always been perfect. To round off the angle is more difficult, and can be done with the skin incision only. The exposure obtained need not be described, as the opening must be tried to be appreciated.

THE fifth International Congress of Medical Electrology and Radiology will be held at Barcelona from September 13th to 18th, 1910. The questions proposed for discussion are as follows: (1) The present state of electro-diagnosis; (2) measurements in radiology; (3) electricity as an anti-phlogistic agent; (4) the electrolytic introduction of medicinal ions compared with the therapeutic action of the constant current; (5) the use of the x rays in the examination of the abdominal segment.

INTESTINAL OBSTRUCTION PRODUCED BY AN ENORMOUSLY DISTENDED STOMACH.

By A. ERNEST MAYLARD, M.B., B.S.LOND.,
SURGEON TO THE VICTORIA INFIRMARY, GLASGOW.

So remarkable and exceptional were certain features in this case that it seemed to me worthy of being put on record.

I have met with instances of great gastric dilatation reaching even to the pelvis, but I have never encountered anything at all approaching the somewhat extraordinary symptoms presented in this instance, nor do I know of any precisely similar illustration in the literature of gastric disease. The patient was a man suffering from advanced carcinoma of the stomach with symptoms of apparently only three weeks' standing, and these of a nature to suggest that the trouble was in the large bowel rather than in the stomach. But before venturing upon any comment upon the case I will let his history tell its own tale.

R. S., aged 66 years, was admitted to the Victoria Infirmary on May 21st, 1908.

History.

He stated that up to two years ago he had enjoyed good health, but at this time he began to lose his appetite, was conscious of a sense of oppression and fullness in the stomach, and suffered from pyrosis. Under treatment these symptoms disappeared. He then continued to take his food as before, and remained actively engaged in his work until three weeks ago, when his bowels commenced to be very costive and he was conscious of distension and gurgling in his abdomen. As the difficulty in getting the bowels to move increased, he used enemata, and thereby effected the discharge of some "little round balls." Neither blood nor mucus was seen. He had had no crampy or acute pains in the abdomen, but merely a sense of great discomfort from extreme distension. He had also noticed internal movements, evidently peristaltic. Position seemed to have some effect on his symptoms. When he lay on his left side they were increased, but diminished when he sat up, as he was then able to belch up some gas. He had not vomited, but pyrosis had been a frequent symptom. He was conscious that he was losing flesh.

Condition on Admission.

When admitted to the infirmary he was noticed to be in a poorly-nourished condition. His face was pinched and drawn in expression. His tongue was coated with a dirty viscid fur, and the teeth were in a bad condition. His temperature was 97.6° F., and his pulse 96. He complained of no pain, but only of an uncomfortable sense of distension. On examination of the abdomen, there was seen to be very marked bulging both in front and laterally, although it was more marked in the left iliac region. No peristalsis was observed; abdominal respiration was diminished. To percussion there was a tympanitic note in the epigastrium, becoming dull down towards the iliac regions and the flanks, and there appeared to be slight shifting with change of position. A suspicion of fluctuation seemed present in the epigastrium. By palpation, "splashing" was detected in the epigastrium, and resistance and tenderness existed in the left iliac region, where slight gurgling was also heard. The area of liver dullness was diminished. Neither the heart nor the lungs presented anything abnormal. The urine was normal. During the three hours that elapsed between his admission and the operation he did not actually vomit, but seemed to cough up a little dark fluid, and a 2-pint enema which was given returned with flatus and a few small round scybalae of black colour.

Before continuing the report of the case, as taken by my resident assistant, Dr. N. McNeil, which proceeds to describe the operation, I will add a few additional observations taken at the time of my visiting the patient in consultation with Dr. George Halket, under whose care he had been for a short time prior to my interview.

It was three days before the patient was admitted to the infirmary that I saw him in his own house with Dr. Halket. In his general condition he was remarkably cheery, and, except that he was pale and somewhat emaciated, he in no way looked like a man suffering from advanced malignant and fatal disease. His chief complaint was abdominal discomfort from inability to obtain a movement of his bowels. His abdomen was greatly distended, and all indications of normal liver dullness had disappeared. There was dullness in both flanks, but tympanicity in the epigastric region and well-marked "splashing." The patient remarked that he had once before had a similar attack, which had completely passed off, and that, although this had lasted longer than the original one, he was confident that it would likewise disappear if only his bowels could be got to move. Dr. Halket, from his previous observation of the patient, had been under the impression that he was suffering from some gastric condition. The symptoms, however, which he presented at the time of our conjoint visit were so suggestive of intestinal obstruction that the suspicion was aroused in my mind that possibly we had to do with a malignant stricture of

the sigmoid or upper rectum, and that the great distension was due to an enormously dilated colon. My advice was, therefore, to give a copious enema, to be repeated if the first attempt failed to have any satisfactory result, with the further instruction that if the symptoms were not relieved he should, without further delay, be transferred to the infirmary.

Operation.

The abdomen was opened by an incision in the left flank. The intestine was seen collapsed and pressed down by what appeared to be a large tense cyst. A second incision was then made into the abdomen in the middle line, when a bluish, thin-walled cyst, with blood vessels stretched over its surface, at once presented. It was punctured, and ink-like fluid, sour to the smell and containing whitish masses of solid matter, spouted out with considerable force. Eleven pints of this fluid were drawn off, and it was then discovered that the supposed cyst was the stomach, which rapidly contracted down, and presented the normal appearance of muscle parietes. The vessels, also, which had spread over the apparent cyst, were seen to be the normal branches proceeding from the two curvatures. On further examination a mass of scirrhus was found involving the lesser curvature and anterior surface of the stomach towards its pyloric end. Nodules were also found freely scattered throughout the mesentery and omentum. The stomach wound was stitched up and both the abdominal incisions closed.

After-history.

He was greatly relieved by the operation, and the next morning was reading the daily paper with very little concern about himself, and feeling comparatively comfortable. In the afternoon, however, the distension commenced again, and on the following day the abdomen was so swollen that the stomach tube had to be passed. By this means a quantity of fluid, similar to that removed at the operation, was withdrawn. The washing-out was then continued on the succeeding days, as much relief seemed to be afforded by it. On the evening of the fourth day he still seemed quite comfortable, but shortly before 2 a.m. on the 26th he suddenly collapsed and died.

Necropsy.

A *post-mortem* examination was made by Dr. John Anderson, who reported as follows upon the condition of the stomach: "The stomach is greatly dilated, and its wall remarkably thin, so that without very gentle manipulation it is easily torn. The cavity contains a quantity of dark grumous fluid. A malignant stricture exists at the pylorus, of the concentric type; it extends along the anterior wall and lesser curvature for about 2 in., causing the wall itself to be about three-quarters of an inch in thickness. An area of ulceration exists on the posterior surface of the growth. The tumour tissue is more evident on the anterior wall; the lumen of the pyloric aperture is still of fair size, admitting the passage of the finger." The liver contained no secondary nodules, and there was nothing of note in the other organs or tissues.

Perhaps the feature of most striking interest among the many perplexing problems which the case presented was the extreme paucity of symptoms, and their apparent want of gravity when considered in relation to the serious nature and extent of the disease. There was one very prominent fact, however, about the patient that served to mask what otherwise might have been much more in evidence and suggestive, and that was his possession of a remarkably buoyant nervous system. He made light of such symptoms as he had, and doubtlessly disregarded others that might have proved diagnostically useful. He never once took a gloomy view of his case, and always regarded his illness as merely transitory. As stated, he was reading the newspaper the morning after the operation, and was often making jokes with the nurses and the resident assistant. Attention is specially drawn to this particular aspect of his case, because, as already stated, it admits of the reasonable assumption that he probably belittled many of the early symptoms which, in a patient of a less optimistic and cheerful nature, might have shown that an organic complaint of the stomach had been in existence for some time. Irrespective, however, of the influence of the nervous system, it is a well-known fact that carcinoma of the stomach may reach a very advanced stage without giving rise to any marked symptoms, so long, apparently, as it is limited to the body of the viscus and does not involve the pyloric aperture. In this case, as ascertained at the *post-mortem* examination, the finger could be passed through the pylorus; and although the disease distinctly involved the pyloric region, the canal itself does not seem to have been markedly obstructed by it. It is, however, impossible to conceive that at the time of the great distension the contents of the stomach were able to pass into the duodenum. Probably the pylorus got kinked or displaced in such a way as to cause occlusion.

The absence of vomiting was somewhat remarkable, and must, I think, be explained on the ground that the hyper-distension had completely paralysed the gastric parietes. It had become little more than a flaccid sac with walls so thin that they must have very nearly reached the bursting point. As shown at the *post-mortem* examination, the greatest care was required not to tear the walls in the process of handling.

Believing the case to be one probably of obstruction in the large bowel, I opened in the left iliac region, deeming it likely that such enormous distension of the colon would hardly take place unless the obstruction was seated low down in the large intestine. It was with a sense of considerable surprise that I found the bowel collapsed, and apparently so as the result of the pressure of a very tense cyst. As the report of the case goes on to relate, I then opened the abdomen in the middle line, and my remark was, when seeing this uniform tense cyst, that had the patient been a female and not a male, I should have thought that I had an ovarian cyst to deal with. The true nature of the swelling, however, at once became evident on letting out the fluid, for the sour smell and the coagulated lumps of what were evidently the result of ingested milk revealed the fact that it was the stomach which had been opened. This became still more conclusive as the muscle parietes of the viscus contracted, and the vessels, which were so stretched over its surface, were seen to be the normal branches extending over the anterior surface of the organ from the greater and lesser curvatures. As gastric obstructive symptoms had never apparently been a feature in the history of the case, I thought it quite possible that, having relieved the great distension, the pyloric aperture might become sufficiently permeable. I did not, therefore, perform gastro-jejunostomy; and, still further, the marked evidence of widespread malignant disease did not render such a proceeding worth undertaking in view of the above possible competency of the pyloric passage. The nature of the fluid was somewhat striking. In appearance it was more like ink; but in constitution it was probably gastric secretion mixed with blood. From the large quantity removed at the operation—11 pints—and subsequently, it hardly seemed possible to believe that it consisted solely of altered blood, but that the major part of the fluid must have consisted of an excessive gastric secretion, for at no period did the patient seem to be suffering from any great loss of blood.

In reviewing the treatment of the case by that superior wisdom which is always derivable after the event, to have simply passed the stomach tube would probably as effectually afforded relief as did the direct incision into the stomach, for it was the method adopted during the four days that life lasted, and which always gave him comfort. But such treatment would have thrown but little light on the true nature of the disease, although it would certainly have aroused suspicions regarding its possible location in the stomach. An exploratory operation would, therefore, doubtlessly have been executed, supposing the patient's condition had been such as to admit of its execution being advisable. Death was evidently due to sudden cardiac failure, a result not unlikely either of the naturally enfeebled condition which, in spite of the patient's buoyant nervous system, was evident; or of possibly some interference with the action of the heart as the result of great gastric distension.

A REPORT on the malarial investigations in Mauritius from November, 1907, to February, 1908, by Major C. E. P. Fowler, R.A.M.C., who was associated with Major Ross in the recent work conducted in that island, has been issued. It contains details of the outbreak of malaria in 1866. This outbreak in an island supposed to be non-malarial forms one of the most interesting epidemiological facts in the whole history of malaria. The report contains recommendations as to prevention, and a permanent staff for antimalarial work has been already partly formed. It will not undertake major works, its duty being minor works and the keeping in order of the major works after completion. A series of most excellent photographs with which the report is illustrated indicate very clearly the tropical nature of the vegetation and the general type of scenery, which resembles that of the West Indian islands very closely. Leaving out of account altogether major works, the minor works will necessarily prove very expensive in such a place, but if the health of the island is to be improved they will have to be carried out.

THE SCIENCE COMMITTEE
OF THE
British Medical Association.

REPORT CXII.

OBSERVATIONS ON THE PHYSIOLOGY OF THE FEMALE GENITAL ORGANS.

BY

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and

PANTLAND HICK, M.B., B.S.LOND., MEDICAL REGISTRAR, ROYAL INFIRMARY, LIVERPOOL.

III.—THE CORRELATION OF THE UTERUS AND OVARIES.

IN this paper we shall give the results (for the most part histological) of several series of experiments which bear upon the correlation of the ovaries and uterus, apart from the metabolic relations existing between these organs in regard to menstruation, which have already been discussed.

The experiments performed consisted of:

A.—1. Removal of ovaries and subsequent histological examination of the uterus.
2. Removal of ovaries during pregnancy.

B.—Removal of uterus and subsequent examination of the ovaries.

C.—Ligation of uterine cornua:
1. Without removal of ovaries.
2. Synchronous with removal of ovaries.
3. Subsequent to removal of ovaries.

The animals operated upon were for the most part rabbits. Three bitches were also used.

Most of the above experiments have been carried out by Bond, Marshall and other observers, but, inasmuch as there have been to some extent conflicting statements made in respect to the results obtained, we have been tempted to carry out these experiments ourselves in order that we might make up our own minds on several of the contentious matters, and on those points concerning which, on theoretical and clinical grounds, we have held views contrary to the results generally obtained. We may say briefly that for the most part our results correspond with those obtained by other observers, but we have been forced to the conclusion that the rabbit is not the best animal on which to carry out experiments, the results of which are estimated by histological examinations of the ovaries, if we wish to compare these results with conditions obtaining in the human subject. Indeed, we believe that certain questions of the greatest importance, such as the effect of the removal of the uterus upon the ovaries, will only be settled by prolonged experiments upon monkeys, or by clinical observation on the human subject; but of this we shall have more to say later. The fact, however, remains that the adult rabbit's ovary is of a very different histological structure from the dog's ovary or the human ovary. It has, however, been a matter of surprise to us that we have not come across adequate appreciation by those who have used rabbits in their experiments of the great difference between the histological structure of these ovaries and that of the human ovary. This difference only becomes marked in the adult rabbit, and may be summarized by the statement that in every normal rabbit—whether virgin or multiparous—the ovary is mainly composed of large cells, sometimes hardly to be differentiated from those which fill the corpora lutea, while there is practically no ordinary stroma. The ova themselves do not appear to be numerous, and are situated near the periphery. (See Fig. 1.) The adult rabbit's ovary, in fact, appears to be of an extremely glandular nature (see also Fig. 2), and in this respect entirely different from the dog's and the human ovary. (See Figs. 3 and 4 respectively.)

These large glandular "stroma" correspond, of course, with the "interstitial" cells which have been investigated by Miss Lane-Claypon.[1] In her opinion, based on careful histological work, these cells are derived from the germinal epithelium, as also are the ova and follicular cells. We have not conducted any detailed research into their origin, but it seems to us that this method of origin is a little strange, seeing that in the ovary of the young rabbit these interstitial cells are entirely absent or very few in number, while primordial ova seem to be more plentiful than in the adult (see Fig. 5).

Whatever their origin, there is no doubt that the presence of the interstitial cells makes the ovary a more glandular organ in the rabbit than in the human subject—the very friability of the adult rabbit's ovary being of itself evidence of a considerable difference of structure from that obtaining in most other mammals. Fraenkel[2] has recently made a long and important contribution on the subject of *la glande interstitielle de l'ovaire*, as it was originally called by Limon. After examining 45 species of mammals he concluded that these cells vary in extent in all, but are most marked in rodents. (We have found them constant in rabbits.) In his (Fraenkel's) experience he has found no trace of this glandular formation in the human subject. In view of these investigations by Fraenkel, and by ourselves in a very small way, we would suggest that the variation may be in proportion to the activity of the thyroid gland, which is notably inactive in rabbits.

Attention has already been called to the close relationship which exists between the ovaries and the thyroid

Fig. 1.—Adult rabbit's ovary. × 200.

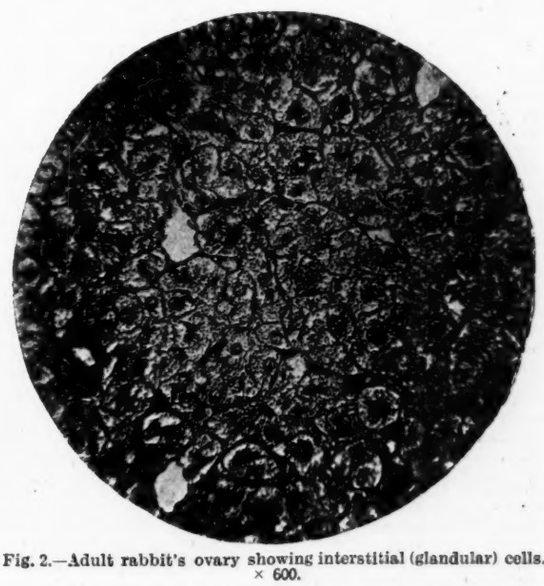

Fig. 2.—Adult rabbit's ovary showing interstitial (glandular) cells. × 600.

gland in regard to the menstrual function and to the calcium metabolism (see Papers I and II).

RESULTS OF EXPERIMENTS.

SERIES A.

I.—*Effect of Oöphorectomy upon the Uterus.*

In this experiment we wished to discover, if possible,

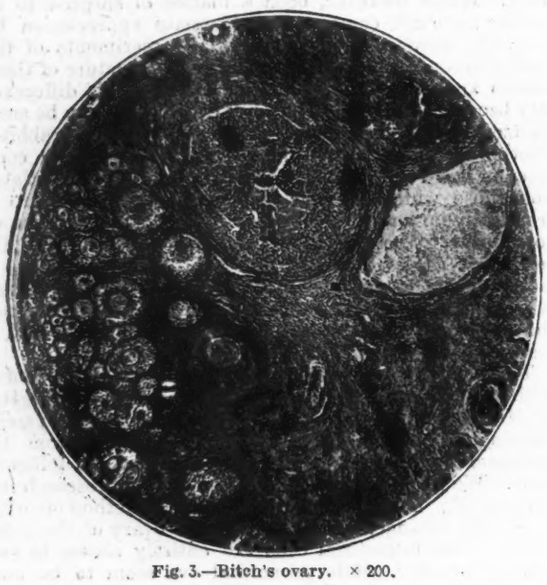

Fig. 3.—Bitch's ovary. × 200.

whether the atrophy which is known to occur in the uterus after removal of the ovaries affects more the endometrium or the muscular layer. For the experiment we used one bitch and rabbits. The following are illustrative of the results obtained:

(*a*) Sable mongrel bitch, aged 6 weeks. Oöphorectomy performed. Animal killed and uterus removed nine and a half months later. It will be seen from Fig. 6 that there is a general arrest of growth which affects the whole uterus, and further that there is some degree of atrophy—most apparent in the muscle layer—which is readily seen on comparison with the uterus from a twin sister, removed on the same day that double oöphorectomy was performed on this bitch (see Fig. 7). Had the uterus, shown in Fig. 6, which was 10 months old, remained *in statu quo* after oöphorectomy, it should have resembled that shown in Fig. 7. There is, therefore, arrest of growth and then atrophy, and the latter most marked in the muscle layer.

(*b*) Doe, aged 6 weeks. Oöphorectomy. Animal killed two months later and uterus examined. A section is seen in Fig. 8. The same condition of affairs is seen in this as was evident in the last case. There is some atrophy of the endometrium, but want of development and atrophy are most apparent in the muscular layer. At one point there is an area of exceptional thinning. This is most unusual and is difficult to account for. In connexion with these two cases it may be contended that, owing to the fact that the uteri had never become active (see Paper IV), the muscle layer had in consequence not developed. This point will be further alluded to presently.

(*c*) Doe, full grown. Oöphorectomy. Animal killed and uterus examined three months later. A section of this uterus (see Fig. 9) shows that the changes which have occurred are most marked in the muscle layer, and that the endometrium is still apparently normal. This is better seen in the section than in the photomicrograph of it.

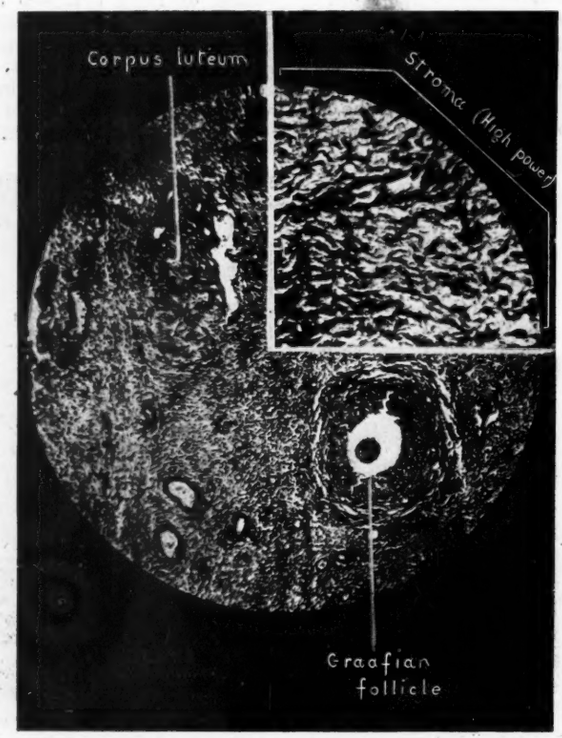

Fig. 4.—Human ovary (adult) × 200, with segment showing structure of the stroma × 600.

(*d*) Doe, full grown. Oöphorectomy. Animal killed and uterus examined three and a half months later. The condition alluded to is seen in this case most clearly (see Fig. 10). The endometrium is quite thick, while the muscular layer is represented by a very narrow band. This animal was pregnant when the ovaries were removed.

It may be of interest to mention here the case of a patient, aged 35, from whom the uterus was removed by

Fig. 5.—Ovary from rabbit a few weeks old. × 200.

one of us by operation (owing to extensive adhesions to the appendix, etc.). The ovaries had both been removed (by another surgeon) for dysmenorrhoea four years previously, which of course influenced us in removing the uterus. The organ removed was examined microscopically (Fig. 11). The glands exist in large numbers and stain well. The delicate stroma of the endometrium and the muscle fibres are both replaced by fibrous tissue.

It would appear, then, that when the ovaries are removed in a young animal the uterus remains in an infantile condition, and undergoes slight general atrophy, which condition may be changed into one of general fibrosis of the organ after many years.

This condition of fibrosis is shown in Fig. 12, which is a section of an infantile uterus removed from a human adult. At the same time a rudimentary uterus may coexist with functionating ovaries, although this uterus may be a mass of fibrous tissue, as is seen in Fig. 13—a section of a rudimentary uterus removed by one of us from a hernial sac. (Owing to the extreme hardness, it was impossible to obtain a good section.) In this case the ovaries were proved to be active, or at any rate to contain corpora lutea on histological examination (Fig. 14).

Conclusions.

1. Removal of the ovaries in young animals causes the uterus to remain infantile—atrophic changes eventually occurring.

2. Removal of the ovaries in adult animals produces *first of all an atrophic change in the muscular layers;* and this

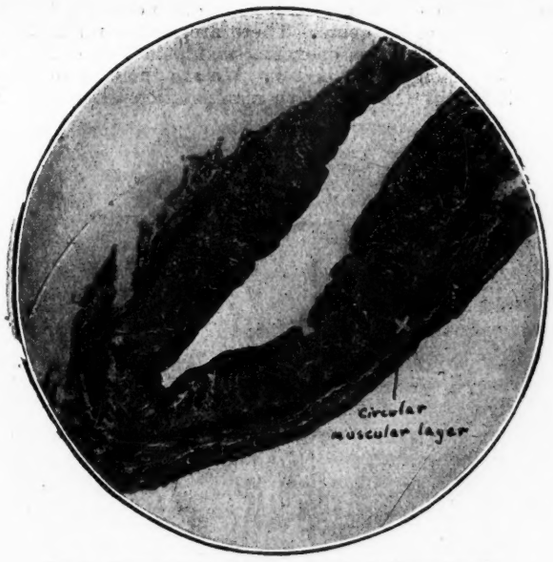

Fig. 6.—Young bitch's uterus nine and a half months afte oöphorectomy. × 200.

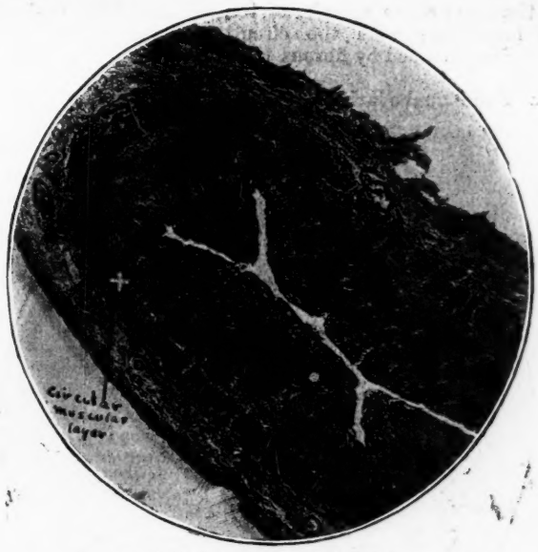

Fig. 7.—Bitch's uterus at age of 6 weeks. × 200.

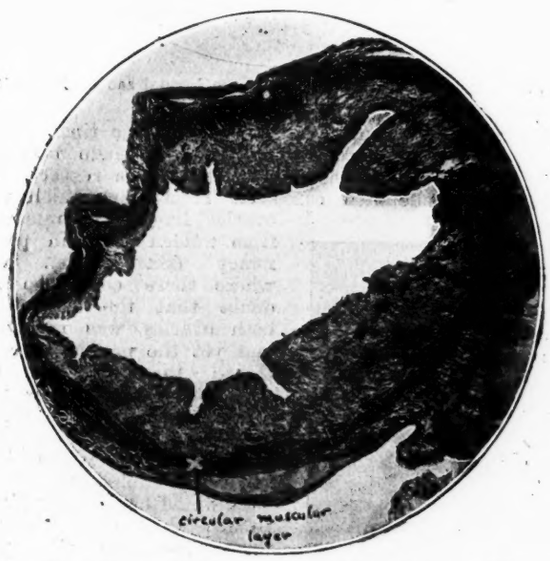

Fig. 8.—Young rabbit's uterus after oöphorectomy. × 200.

Fig. 9.—Rabbit's uterus after oöphorectomy. × 200.

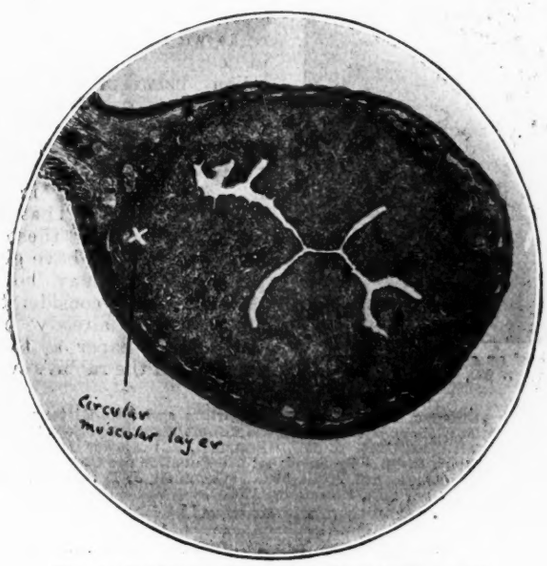

Fig. 10.—Rabbit's uterus after oöphorectomy. × 200.

Fig. 11.—Uterus of woman four years after oöphorectomy. × 200

in time may cause atrophy of the endometrium, probably by interfering with the circulation, the whole organ becoming invaded by fibrous tissue after sufficient lapse of time.

3. Functional ovaries may coexist with infantile uteri.

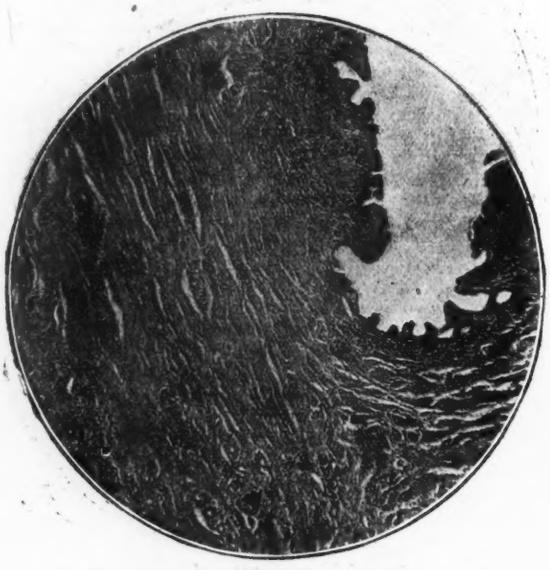

Fig. 12.—Infantile uterus from adult woman. × 200.

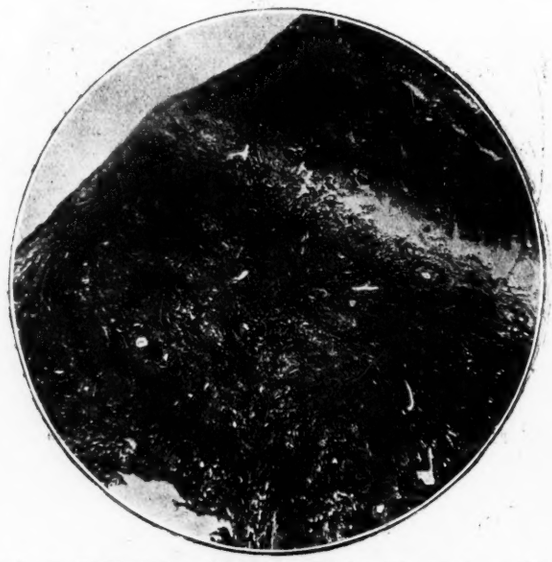

Fig. 13.—Rudimentary uterus from the hernial sac of an adult woman. × 200.

II.—*Removal of Ovaries during Pregnancy.*

In these experiments we endeavoured to remove the ovaries of rabbits at different stages of pregnancy as estimated from their connexion with the buck. The following are illustrative cases:

(*a*) Black doe. Opened in the anticipation that she was a few days pregnant. As pregnancy could not be detected, the ovaries and uterus were examined and handled and the abdomen closed. There was no further connexion with the buck. Twenty-three days later one young one was born alive. This case was therefore regarded in the light of a control experiment.

(*b*) Grey doe. Oöphorectomy was performed on the seventh day. The uterus was enlarged and small nodules visible. No abortion was seen to occur. On the thirty-third day after operation the abdomen was opened, and the uterine cornua were found to be very small. Abortion had undoubtedly occurred.

(*c*) Black doe. Oöphorectomy was performed on the fourteenth day of pregnancy. Abortion took place on the following day. The animal was killed twenty days later and the uterus found to be quite small.

(*d*) White and grey doe. Oöphorectomy was performed on the twentieth day of pregnancy. Abortion occurred on the following day.

Fig. 14.—Ovary from hernial sac of an adult woman (same case as Fig. 13). × 200.

Other similar experiments were performed, with the invariable result that abortion occurred in every case in which oöphorectomy was performed. Great care was taken in all cases not to expose the uterus, nor to handle it, and the operation was always completed in two or three minutes.

There has been much discussion in connexion with this question since ignipuncture was first performed upon the corpora lutea of pregnancy, and Fraenkel[3] claimed that the secretion of the corpus luteum was necessary for the implantation of the ovum. There are, however, still those who assert that the operative manipulations cause the abortion which usually occurs. We are inclined to think that it is not the operative manipulation altogether, in view of our control experiment; at the same time, we do not think that a comparison can be made between rabbits and the human subject in this respect, for there are undoubted cases on record in which the ovaries have been removed from women early in pregnancy (six weeks), and where there could be no doubt that the whole of both ovaries was removed, and yet the pregnancy continued to full time. A good example of this is the case reported by J. E. Gemmell,[4] with the subsequent history of which he has kindly acquainted us.

It would be fair, therefore, to say that while the internal secretion of the ovary is favourable to the continuation of pregnancy (and this will be easily understood by a reference to what we have already stated in connexion with the relation between the ovary and the calcium metabolism), on the other hand, this secretion is not absolutely essential in that respect—at any rate, in the human subject. That our experiments and those of others on rabbits have given positive results may be explained by a consideration of what has already been said in this paper as to the structure of the rabbit's ovary.

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(*To be continued.*)

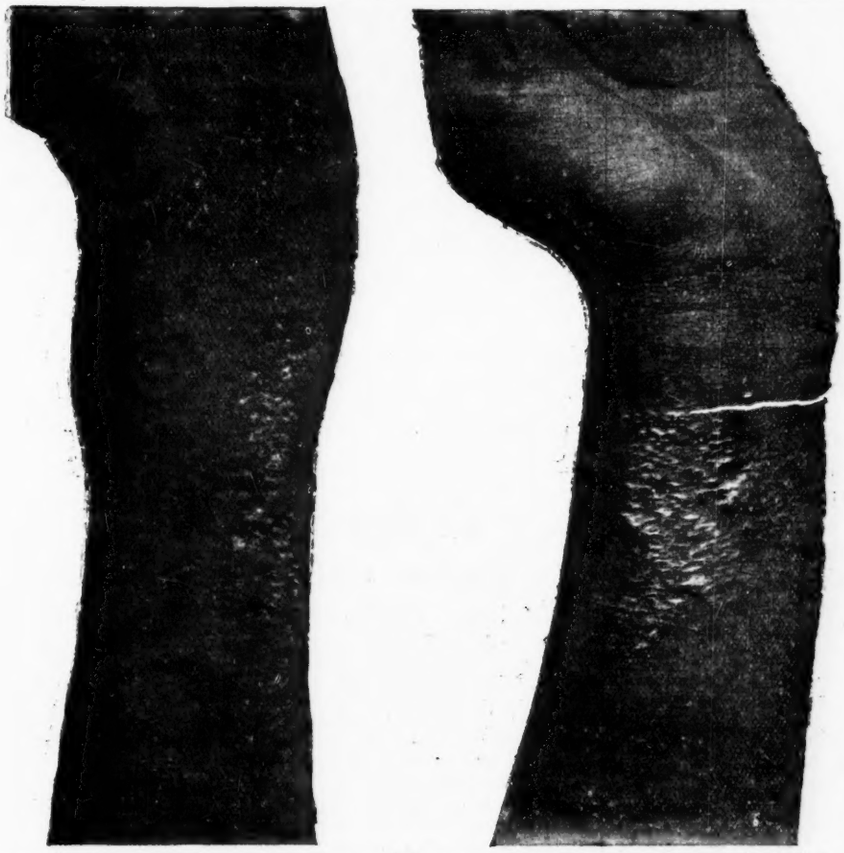
THE University of Geneva will celebrate the tercentenary of its foundation in July of the present year.

Memoranda:
MEDICAL, SURGICAL, OBSTETRICAL.

THE SKIN LESIONS CAUSED BY THE MILLEPORAE.

AMONG the many forms of dermatitis caused by various animal and vegetable agencies, one of the most severe is that inflicted by the hydroids of the hydrocoralline millepores. The stony colonies of these hydrocorallines are generally called "corals" by the dwellers on coral reefs, and the Malays have given them the name of "Karang gatal," or itchy corals. In most of their obvious characters these colonies closely resemble the harmless madrepore corals, which possess no power of causing skin lesions. In the case of the millepores, the injury is inflicted by numerous thread cells, whose spent threads may be seen waving over the surface of colonies kept under observation, and the injury that they cause may be very severe.

The immediate signs of contact with a colony are acute erythema and severe pain. In cases in which the contact



area is large, papules rapidly form and become pustular, and a very extensive desquamation follows.

In the case figured, the flexor surfaces of both forearms were extensively affected. The patient was a Chinaman, who, in his efforts to avoid being knocked down by a wave, had grasped a colony of the millepore. Large pustules formed later on the sites of the stings, and the desquamation was extensive. One curious feature of the lesion is its lasting nature, for the site of a sting will remain red, and will sweat profusely, for more than a fortnight after contact with the colony. It is of interest that the different facies of the species Millepora possess different powers of stinging, and the sting of the facies *Alcicornis* is more severe than that of *Complanata* or *Verrucosa*.

FREDERIC WOOD JONES, B.S.Lond.

THE TREATMENT OF PROLONGED CASES.

IN a hospital resembling that built by the late Sir John Jaffray at Birmingham for the purpose of relieving the congestion of a large city hospital (an institution in which the patients require active treatment, which is neither a convalescent home nor a hospital into which patients are received first hand), the question of the means of promoting a quick return to health of those who have missed the first period of their allotted time is not easy.

A number of the cases suffer from wounds which have not healed by first intention, the cause sometimes, but not always, being an invasion of the wound by micro-organisms; others are tuberculous cases which have required surgical aid. The crux of the treatment of these prolonged cases would seem to be a constant ringing of the changes in the use of the various methods to promote healing at our disposal.

Briefly, these are change of air, change of food, constant change of local treatment, treatment by vaccines, rest. Local treatment resolves itself into renewed stimulation by free drainage, congestion, depletion, immersion. With regard to drainage, rubber tubing gives a far better result than gauze wicks, which do not seem sufficiently cleanly in the treatment of sinuses, however narrow they may have become.

I have been singularly unfortunate in that I have scarcely ever seen a good result, either in my own cases or those of others I have been privileged to watch, following congestion treatment of a part by proximal constriction with a rubber bandage. The theory and simplicity of the method must appeal to every medical practitioner; but, personally, I have never materially hastened the return to health of any patient by this method as far as I am able to judge.

Cupping, on the other hand, has yielded splendid results in the treatment of surgical wounds which have not reacted as they should to the care bestowed on them. The local congestion produced by cupping, followed no doubt by temporary vasomotor paralysis and an active flooding of the part with fresh lymph, has led to rapid recovery; especially is this true in the treatment of empyemata. Of the many lotions in use, two seem to stand out rather more than the rest—namely, izal, which has a favourable action on tuberculous granulation tissue and tuberculous lesions of old standing; the other a solution of chloride and citrate of sodium. The action of these two salts is well known, and, when used in combination with citric acid given by the mouth in 30-grain doses thrice daily, the time of healing of sluggish wounds and tuberculous empyemata has been reduced by at least one-third. Severe compound comminuted fractures in long bones have shown gratifying attempts at throwing off sequestra and rapid union under the influence of these methods.

The constant striving after something new in the practice of medicine brings home most forcibly the consideration that we can after all only place the patient in the best position for the patient to help himself.

C. N. SLANEY, M.R.C.S.,
Birmingham. Resident Surgical Officer, the Jaffray Hospital.

A CASE OF HYDROPHOBIA.

A MAN attended suffering from what appeared to be hydrophobia, but the length of the incubation period made one pause before pronouncing a definite opinion.

Sixteen years previously he had been bitten by a mad jackal, which sprang up at him and fastened on his face. He strangled it, but its grip was so tight that only with difficulty could it be removed after death. He used native medicines and the wound healed without causing him any further trouble.

Two days before coming to us he had some slight fever, and on the morning of coming awakened at 4 a.m. with violent sickness. On admission the temperature was 101° F., with quick, irregular pulse, and he complained of not being able to eat or drink though suffering from great thirst. We tried him with a little water, and he made a great effort to swallow, but in the act he had such violent spasms that we desisted. He stayed with us all that day and night, the spasms becoming more frequent and independent of food or water. His speech, too, became more difficult and his pulse weaker, and every now and then he had a respiratory spasm. We tried to feed him by nutrient enemata, but that also caused the spasms, and he besought us not to attempt it. With great difficulty he managed to swallow two or three grains of rice rolled up into small pellets and sucked a little bit of cloth which had been previously soaked in water.

The next morning, at his own most urgent request, he was allowed to be taken home, and died that evening. From one who was with him after he left us I learned that he retained consciousness to the end, and never became violent. He had always been a strong man, leading an open-air life as a gardener, with no tendency to hysteria, and there appeared to be no other cause to which one could attribute the symptoms. The marks of the wound were visible on his face, and the history given was corroborated by others. We could get no history of any fresh inoculation during those sixteen years, and were, therefore, forced to the conclusion that this was a case of hydrophobia with an exceptional incubation period.

N. M. GAVIN, F.R.C.S.Edin.,
Irish Mission Hospital, Anand, Western India.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

EAST LONDON HOSPITAL FOR CHILDREN.

DOUBLE EMPYEMA WITH PNEUMOCOCCAL INFECTION OF THE SKIN AND CONJUNCTIVAE.

(Under the care of Dr. J. A. COUTTS.)

[Reported by D. L. MORRISON, M.D.Edin.]

G. S., a fat healthy looking boy, aged 7 years, was admitted to the East London Children's Hospital, Shadwell, on August 9th last, with a one day's history of pain on the left side of the chest below the nipple. He was rather apathetic and inclined to be drowsy. The temperature was 103°, and the pulse 136. The breathing was easy and at the rate of 40 per minute.

Immediately below the left nipple there was slight dullness, harsh breath sounds, and pleuritic friction. Two days later the dullness had extended round to the back, and faint bronchial breathing was heard at the left base.

The complexion was of a healthy red, but soon the patient became flushed. The flushing, which was a prominent feature throughout the illness, presented a mottled appearance, extending down over the chest and arms.

By August 17th the breathing had become much distressed, the patient had assumed a very bloated look, and altogether he appeared extremely ill. There was absolute dullness and oegophony at the left base, with some impairment of resonance also at the right base. On the left base being explored, thin pus containing pneumococci was obtained.

Next day a piece of rib was resected, and 6 oz. of pus evacuated.

On August 23rd the wound was discharging freely, but the breathing was still very distressed. The temperature still kept up, the pulse-rate was 144, and the respirations 56.

On August 27th, as the dullness at the right base had increased, it was explored, and thin pus containing pneumococci found. Under cocaine, by simple intercostal incision, about 6 oz. of pus were then evacuated.

On August 30th both wounds were discharging freely. Around the one on the right side the skin had become harsh and dry, and whitish blebs had made their appearance. There was also conjunctivitis of the left eye.

On the next and following days the whole surface of the skin of the face, arms, legs, and back became very harsh and dry. The blebs, which began round the wound on the right side, rapidly spread up the back on to the right shoulder, and on September 1st they had reached the right side of the neck and face. The blebs, which varied much in size, were of a white colour, and in about forty-eight hours after appearance burst, and the epithelium then peeled off. Their contents yielded a pure culture of the pneumococcus, as did the discharge from the conjunctivitis, which now affected both eyes.

On September 4th the patient began to improve; the discharge from the empyema wounds became less, and the skin of the back, face, and neck desquamated in large flakes.

From this date onwards the improvement continued. The discharge from the wounds became daily less, and on September 18th both wounds were quite healed. The epithelium of the entire body, including that of the scalp, desquamated, at first in large flakes, and later in small particles. The desquamation continued for quite three weeks after the appearance of the blebs.

On September 24th the boy was discharged to the convalescent home at Bognor.

This case seems worthy of record from the extreme rarity of pneumococcal infection of the skin. It is also of interest in showing the advantages of treating certain empyemata by the method of simple intercostal incision as opposed to resection of a piece of rib. In this case the empyema on the left side was operated on by resection of rib nine days before the right side was opened by simple incision, yet the latter drained quite as freely, and the wound had healed up on the same date as the one operated on first.

The advantages here of treatment by simple incision were therefore great, for at a time when the patient was very critically ill it was possible to operate speedily under local anaesthesia without the slightest shock to the child, and with a more favourable result.

For permission to publish this case I am indebted to the kindness of Dr. J. A. Coutts, under whose care the patient was.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, March 8th, 1909.

JOHN LANGTON, F.R.C.S., in the Chair.

Fracture of Base of the Skull.

MR. L. B. RAWLING, in a paper on some points in the surgical treatment of fracture of the base of the skull, said that profuse and continuous haemorrhage from the external auditory meatus suggested the probability that the surgeon had to deal with a case in which there was an extradural extravasation and an extensive fracture of the petrous bone, probably involving the tegmen. Plugging of the external auditory meatus was to be condemned, insomuch as the free escape of blood was the one factor that prevented cerebral compression; and operative measures for the relief of the extravasation were to be seriously taken into consideration, even in the absence of all the classical symptoms of middle meningeal haemorrhage. Syringing of the ear was absolutely contraindicated, on the ground that the lacerated tympanic membrane and comminuted tegmen tympani exposed the patient to grave risk of meningeal infection. After investigating a large number of cases of fracture of the base of the skull—about 300 in all—during the past six years, he was enabled to classify the cases into three groups: (1) Where the temperature rose steadily and progressively to 103° or more, the reaction from the primary collapse stage being of a marked and forcible nature, and the patient dying with definite evidence of cerebral compression. (2) Where the temperature rose to 100° to 102°, and there "marked time." That was the "crisis" of the case, a further rise or fall almost invariably indicating death or probable recovery. (3) Where the temperature remained subnormal, the

patient remaining in a condition of severe cerebral shock and usually dying within a few hours. Venesection was a valuable means of reducing increased intracranial pressure. It was mainly of use in those cases that hovered between what one might call early or slight compression and the fully developed condition. "Decompression" operations might be carried out over the cerebellar fossa or over the temporal region of the skull. The temporal operation, more correctly known as the "intermusculo-temporal" operation of Harvey Cushing, often brought about the most satisfactory results. The advantages of the operation were the frequency with which the bony lesion occurred in the middle fossa of the skull, the fact that cerebral contusions were especially liable to involve the tip of the temporo-sphenoidal lobe, the exposure of the meningeal territory, and the ease of determining the presence of an extradural haemorrhage, the possibility of draining through a split muscle rather than directly through the scalp, the subsequent protective action of the muscle in case a hernia tended to form in consequence of traumatic oedema, and the subsequent absence of any deformity, the skin incision being carried out in the main through the hairy part of the scalp. With regard to lumbar puncture, he did not look upon that method as of any use in the treatment of injuries to the head. From a diagnostic point of view, the presence of blood in the cerebro-spinal fluid, as withdrawn by lumbar puncture, suggested the presence of intradural haemorrhage, nothing more. He had never seen the slightest benefit result from that mode of treatment.

Mr. G. TEMPLETON read a paper on a case of gastric dilatation associated with extreme cyanosis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Friday, February 12th, 1909.

A. R. PARSONS, M.D., President, in the Chair.

Tumour of the Brain.

DR. BEWLEY exhibited a specimen of cerebral tumour:

The patient, a railway guard, had five severe epileptiform fits at intervals between June and November, 1907. He complained of attacks of a tingling feeling in his left side, which was relieved by severe rubbing. He once in hospital had an epileptiform fit, beginning in the left arm. He never had headache throughout, nor did he ever vomit. He had no optic neuritis. Still, they could not help thinking that there must be a brain tumour on the right side of the brain, and from the frequency and pronounced nature of the attacks they thought it a cortical lesion, but the evidence as to localization was not great. Knee-jerks were absent. There was no paralysis: the man could walk very well, and was apparently in good health. He was admitted to hospital on November 14th, and went home for Christmas on December 24th. Four weeks afterwards he returned a good deal worse. There was almost complete paralysis of the left arm and incomplete paralysis of the left leg, anaesthesia of the left arm and leg, and great drowsiness. The left side of the face was slightly paralysed. The drowsiness continued and merged into coma, and he died on February 11th comatose. The brain was hardened by a method suggested by Dr. Leeper: A large aspirating needle was passed through the orbit and back into the subdural space, and through it a quantity of formalin was poured in. The brain preserved its shape exceedingly well, and the sections exhibited showed the tumour clearly.

The suspicion that it was a cortical lesion was not correct. It was an infiltrating glioma, and was interesting from the absence of the three cardinal signs of tumour and from the history of epileptiform seizures, and showed the difficulty of diagnosis in some cases of brain tumour.

Dr. LEEPER said the method to which Dr. Bewley had referred was taught to him by Professor Marie at Paris. He used it with satisfactory results in the case of insane persons who were a long time dying. He thought the epileptic seizures might have been due to multiple thrombosis. It was suggested that the blood of epileptics became more acid than normal, and that thrombi formed.

Septic Endocarditis starting from Congenital Pulmonary Narrowing.

Dr. BEWLEY related a case:

The patient was a man, aged 32, who since childhood had been told that there was something wrong with one of the valves of his heart. About July or August, 1908, he began to suffer from ills and rigors. These recurred from time to time, and about September he got some pleuritic trouble on his left side. When in Cork he suffered from pain in his right side, and Dr. Pearson, of Cork, found some pleural trouble. He had a good deal of fever. Dr. Pearson found he had a loud systolic murmur heard all over the region of the heart, but specially loud over the second left costal cartilage. He thought he had a congenital narrowing of the pulmonary orifice. The patient was afterwards brought to Dublin and put under Dr. Bewley's care. He looked ill, and had some degree of irregular temperature. He had wasted a good deal. His liver was palpable, but seemed fairly natural in shape. A trace of albumen was present in the urine. He had a very slight cough. Dr. Bewley thought the case was probably one of general tuberculosis, but no tubercle bacilli were found on examination. Another possibility was that there was a concealed focus of suppuration. The third idea was that it was a case of septic endocarditis. He did not himself think so, as there was no sign of emboli in the body. The patient became gradually weaker, and died in ten days. When the heart was removed he noticed that the two ventricles had approximately the same thickness in the muscular walls. The tricuspid orifice was slightly smaller than one would expect, and rather smaller than the mitral orifice. In the right ventricle he found a constriction about 1½ in. below the pulmonary valve. When they opened the pulmonary artery they found, starting from the constriction and growing up to the valves, which looked fairly healthy, an enormous mass of vegetations. There was also a small opening in the septum between the ventricles. The left side of the heart and the aorta were perfectly healthy. They found scattered through the lungs a great many masses of infarcts surrounded by zones of inflammation; one or two were breaking down into little cavities.

The diagnosis was a slow form of septic endocarditis, grafted on a congenital narrowing of the right ventricle just below the pulmonary orifice.

The SECRETARY said the sections of the vegetations under the microscopes were crowded with micro-organisms. There were present a diplococcus and a Gram-staining bacillus. Inoculations from a very mixed culture-tube made from one of the infarcts killed two rabbits in the course of a few hours. He recovered two organisms from the animals. He was almost certain that the diplococcus was the pneumococcus, but he did not yet know what the bacillus was.

Dr. BEWLEY, in reply to Dr. KILPATRICK, the PRESIDENT, and Dr. HARVEY, said he only had charge of the case ten days, and during that time the patient was obviously dying. He could not find bacilli in the sputum, and he did not get any examination of the blood made. The condition might have been due to some roughness about the constriction and the increased force. He did not think there was any change of aëration. The pressure on both sides was probably much the same, so that there was evidently no free flow of blood between the two sides. All the other organs were healthy; he did not examine the brain. There was no trace of sepsis except in the lungs.

Duodenal Ulcer.

Dr. JAMES LITTLE exhibited a specimen:

The patient was of the age, about 60, when duodenal ulcers were, in his experience, most frequently seen, and he thought that nearly all he had seen had been in men, and he had seen more in private practice than in hospital practice. The man was well nourished and healthy-looking, but for five or six months he had been subject to abdominal pain, which was in proportion to the solidity of the food he took. The pain was rather to the right of the umbilicus. About ten days before admission to hospital he had two bleedings from the bowel, but he did not seem to think himself very ill. After three or four days in hospital he passed half a chamber vessel full of bright-coloured blood, which looked as if it had escaped from the intestine not very far up. No trouble was found, however, in the rectum or descending colon. He had a further bleeding, and later he suddenly *vomited* for the first time a large amount of blood. On the same evening he had another large haemorrhage, and died an hour or two afterwards. At the *post-mortem* examination they found a duodenal ulcer, and the cause of death was the rupture of an artery in the floor of the ulcer, which really was the head of the pancreas. He had never before seen death under the same circumstances. There was a second ulcer in the duodenum.

The PRESIDENT asked if the man had exhibited any symptoms of hunger pain.

Mr. WHEELER had had five cases recently; one was verified by *post-mortem* examination and four by operation. All were past middle life, but none of the age of 60. In four out of five duodenal ulcer was diagnosed chiefly on account of the hunger pain, which came on generally on the right side about four hours after food, and was relieved by eating something. Vomiting was irregular, and had no relation to food. In the fifth case the ulcer had perforated

when the abdomen was opened, and was not diagnosed; the duodenum was practically rotten and leaking.

Mr. STOKES said Mayo found that 69 per cent. of ulcers were duodenal, and in males the proportion was still higher. Gastric ulcer was rather commoner in females. The hunger pain was found in any lesion of the middle gut.

Dr. MOORHEAD said that of two cases of duodenal ulcer he had seen, one was in a woman aged 50, and typical hunger pain was present. The ulcer was found by operation, and a complete cure effected. The other case was a young man, aged 22, who never had the hunger pain. He had symptoms of perforation, and a perforated duodenal ulcer was found on operation.

Dr. CAHILL said the age limit was probably the final crisis after a chronic trouble of many years, so that duodenal ulcer began much earlier than was usually thought. The hunger pain was found in several other conditions. A definite time relation could be found by giving the patient something indigestible, like pork, to delay the pain.

Dr. LITTLE, in reply, said he had no doubt that the hunger pain was clinically important, but it was certain that it was not so pathognomonic as it was supposed to be.

Tumour of Brain.

Dr. LITTLE also exhibited a specimen of cerebral tumour taken from a girl aged 17.

She had come to hospital about ten days before, having sickened and vomited on the Friday previous to the Tuesday on which she was admitted. On the Sunday she became unconscious. She was unconscious on admission, and appeared to have paralysis of both sides of the body. She had very strongly-contracted pupils, and, remembering a similar circumstance in a case many years ago, he made a diagnosis of a pons lesion. He made a *post-mortem* examination, and in the centre of the pons he found a haemorrhage as big as a marrow-fat pea.

Professor SCOTT said it was a pure haemorrhage, but not of an ordinary type. Nearly every artery appeared to have weakened walls, and the apparent tumour was made up of innumerable discrete haemorrhages.

Stenosis of Tricuspid and Mitral Orifices.

Dr. COLEMAN exhibited a heart with stenosis of tricuspid and mitral orifices.

The patient was a girl about 24. She had a history of attacks of rheumatic fever. She was admitted to hospital about six months ago, and died in five months. The prominent symptoms were dyspnoea, cyanosis, and some oedema, and two or three weeks before she died she had embolism of the right femoral artery, and in the case of the brachial artery the nutrition of the limb was retained, but she got gangrene up to the knee in the right leg, and amputation was performed. He diagnosed mitral stenosis from the physical symptoms. An unusual point was that the presystolic murmur was heard over a more extensive area than usual. A thrill was present, but only over the mitral area. She was found at the *post-mortem* examination to have well-marked mitral stenosis. The mitral orifice was reduced to a mere slit, and she had considerable stenosis of the tricuspid. In addition, she had recent vegetations on the aortic cusps.

Dr. BEWLEY and Dr. LITTLE recalled similar cases.

UNITED SERVICES MEDICAL SOCIETY.

Wednesday, January 13th, 1909.

Surgeon-General Sir ALFRED KEOGH, K.C.B., D.G.A.M.S., in the Chair.

The Work of Medical Officers of the Territorial Force.

LIEUTENANT-COLONEL C. H. MELVILLE, R.A.M.C., read a paper on what can be done by medical officers of the Territorial Force in time of peace to prevent disease and promote physical efficiency in time of war. He divided this into three heads: Sanitary education, the collection of sanitary intelligence, and the encouragement of physical education. First: The necessity of educating the men composing the Territorial Army in the essentials of camp sanitation. The two great functions of sanitation—water supply and the removal of excreta—had up to the moment been performed for their benefit; the turning of a tap, or the pulling of a handle comprise all the individual effort demanded of the men in these two directions. If either the tap or the handle should fail to perform their proper duties, the plumber or the turncock were at hand to rectify matters. In camp he was individually responsible for preventing his excreta, which could no longer be removed automatically, from becoming a source of nuisance or danger to himself or his comrades. The speaker emphasized strongly that the responsibility of the soldier with regard to his excreta and their proper disposal was absolutely and directly personal. The immediate burial of excreta was the first and leading principle of all camp sanitation. This was the first thing that the men and officers of the Territorial Army should be taught, and the burial of excreta must be done quickly. Men must also be taught moderation in drinking—not merely alcoholic drinks, but drinking generally. With reference to preventive inoculation against enteric fever, he thought that every young man who was going to be exposed to the risks of campaigning should be inoculated. As a practical measure extended to all ranks of the Territorial Army in time of peace (it would be impossible to perform the inoculation after a war had broken out) there were practical difficulties in the way. Still, of the benefits of inoculation there could be no doubt to anyone who studied the evidence; and if the prejudice against it was ever to be removed, the medical officers of the Territorial Army were in a better position to effect it than any other body of men in the country.

Sanitary Intelligence.

This was a matter in which not only the medical officers of the Territorial Army could help, but in which all the country practitioners of the British Isles could take a share. The information needed would comprise the situation and character of the best camp grounds, the nature of the water supplies of the county, and the buildings suitable for adaptation as barracks and hospitals and the local facilities for procuring the equipment necessary for such adaptation.

National Physical Education.

There was no doubt that ordinary men of the class from which the ranks of the regular army were recruited, and to a less extent, though still to a certain extent, the classes from which the rank and file of the Territorial Army would be drawn, suffered from a want of ability to get the best use out of their limbs. This could only be remedied by universal physical education in boyhood and youth.

Lieutenant-Colonel C. P. OLIVER, R.A.M.C.(T.F.), remarked that he had lately had personal experience of the light and airy fashion in which combatant officers of the Territorial Force treated the subject, and of the general apathy that pervaded the commissioned ranks in matters of sanitation. He felt convinced that there was a splendid opportunity for the Territorial medical officer to educate and also to gain the sympathy of the combatant officers in this direction. As to the physical deterioration of the recruit, he looked for a great improvement in the physique of the rising generation as a direct result of the medical inspection of children attending the public elementary schools. This was the class from which practically the whole of the recruits were drawn.

Lieutenant-Colonel J. HARPER, R.A.M.C.(T.F.), said the lecturer had pointed out the fundamental hygienic importance of the individual attending to his own excreta. The practical difficulty was how to teach the lesson to the officers and men of the combatant branches, who were the majority of the whole force, and were careless, probably through ignorance, on this point. As regards inoculation for enteric, inasmuch as the protective effect was only temporary, at which period of his service did the lecturer propose that the Territorial soldier should be inoculated so as to be ready for a war the date of which was uncertain?

Colonel ANDREW CLARK, R.A.M.C.(T.F.), mentioned the difficulty medical officers had in showing the combatant officer the necessity for sanitary care. He did not think combatant officers had hitherto really paid attention to the medical department of the volunteer army, but they had to see differently now, and he thought they were proceeding to do better with the point of sanitation.

Major W. S. HARRISON, R.A.M.C.(T.F.), said that as regards inoculation against enteric fever he thought they could safely say that the protection offered by inoculation would last at least two years, and, as a matter of fact, after examining the blood of men who had been inoculated seven years ago, he found traces of the result of their inoculation. He thought that if an army went into the field without being inoculated the amount of enteric would be very much higher than if it was inoculated.

Colonel W. G. MACPHERSON, R.A.M.C., said that military medical officers knew a great deal about camp sanitation, and the education was quite simple; there ought to be no difficulty in training the Territorial Force in the subject. Camp sanitation would not be the chief difficulty in this country. In case of war large standing camps would be avoided, and buildings would probably be the method of accommodating the Territorial Force.

Surgeon-General W. L. GUBBINS said there were three points: First, the inoculation of Territorials; secondly, the collection of statistics as regards camps; thirdly, their education and physical training. Regarding the inoculation of Territorials, he looked upon this as impracticable to begin with. In India, where he had spent the last five years, he often found much difficulty in pushing inoculation, though where there was a good commanding officer possibly some 75 per cent. of the regiment would be inoculated.

Lieutenant-Colonel J. COTTELL, R.A.M.C., alluded to the very excellent remarks as to drinking, and was of opinion that a man could march just as well for half a day without drink as he could with it. He did not think the men should be allowed much drink before they started the day, as it only caused increased thirst.

Major J. K. RITCHIE, R.A.M.C., thought that the education of the officers and men in the elements of sanitation was the most important duty of the Territorial medical officers. He also suggested that during route marches no water bottles should be carried and no men allowed to fall out to drink. They would soon learn how easy it was to do without drinking and how much better they would march.

Lieutenant-Colonel MELVILLE replied briefly.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 3rd, Dr. EDWIN BRAMWELL, in a paper on the *Problem of the sane epileptic*, said that, according to the Poor Law, sane epileptics were epileptics not certified as lunatics under the Lunacy Act of 1890. The Royal Commission on the Care and Control of the Feeble-minded pointed out in their report (1908) that

> sane epileptics *include* epileptics whose minds are feeble, but who will attend to advice; and praise or blame affects them; who are subject to control by friends or self-control.

The school education of the epileptic was often interfered with in such a way as to prejudice his chance in the competition of after-life. Difficulties arose when he left school. He was debarred from following certain occupations in the pursuit of which the occurrence of a fit might, from the special nature of his work, be attended with dangerous consequences. Again, even if he was endowed with the necessary mental and physical qualifications of the successful breadwinner, he was frequently precluded from earning the support necessary for his maintenance by the very fact that he suffered from this disease. It was still more difficult for the sane epileptic of under average mental capacity to support himself in any walk of life other than the lowest form of manual labour. A certain proportion of sane epileptics drifted into the workhouse. For instance, it was ascertained by the special investigator of the Royal Commission that there were 91 individuals whom he regarded as sane epileptics in the workhouses of the Manchester, Chorlton, and Prestwich area.

> The great majority of which, all except thirteen, have been obliged to come to the workhouse as the result of the interference with their power of getting or retaining work which the fits entailed. Several had held fairly good positions and done distinctly skilled work before their affliction forced them to relinquish their work.

The speaker urged that the sane epileptic, especially one capable of and willing to work, was at least as deserving a subject of philanthropy as, for instance, the imbecile; yet, to use the words of Dr. Aldren Turner:

> Unless he becomes insane, or is at the outset feeble-minded or defective, or becomes a pauper, neither philanthropy nor the State takes note of his condition.

The Royal Commission came to the conclusion that the proportion of sane epileptics in England might be stated at 1 to 1,000 of the total population. It was noted in the Blue Book that "there were no sufficient statistics of sane epileptics in Scotland." So far as the speaker knew, epilepsy was not less frequent north of the Tweed. He had notes of between 60 and 70 cases of idiopathic epilepsy, the very great majority of which he would class as sane epileptics, and a number of which showed little or no mental deterioration, which he had seen in the out-patient room of Leith Hospital alone during the past six years. These cases were almost without exception resident in the town of Leith. It was rather remarkable that in Scotland, where the hospitals, asylums, deaf and dumb and similar institutions were rightly regarded with so much pride, nothing had been done for epileptics. The only explanation for this circumstance was that up to the present there had been no attempt to point out this deficiency by those who were in the way of seeing a large number of these cases. An epileptic colony in Scotland on the lines of the Chalfont Colony for the reception of epileptics belonging to the respectable working classes and lower middle classes is greatly to be desired. It would require to be founded by private enterprise, and the purpose of the paper was to emphasize the need for provision for such cases, in order that if the opinion of any of the profession was asked regarding the distribution of charitable bequests, they might realize the demand that exists for an institution of this kind. In the discussion which followed, the PRESIDENT, and Drs. AFFLECK, BYROM BRAMWELL, and BURN-MURDOCH and others took part.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 19th, Dr. ROBERT JARDINE in the chair, Sir GEORGE T. BEATSON opened a discussion on the *Treatment of suppurative appendicitis*. He said suppurative appendicitis was localized or diffuse, the latter comparatively rare. General peritonitis was not necessarily suppurative. It might be merely a sympathetic reaction of the unattacked portion of the peritoneum induced by the localized affection in the right iliac region. The intensity of symptoms was no reliable guide to the severity of local conditions. Pathological examination of diseased appendices by Professor Muir demonstrated that the initial mischief was not a general mucous catarrh, but a small lesion in the mucous membrane, by which infection had entered and made its way through all the coats of the appendix. He treated general suppurative peritonitis by rapid laparotomy with drainage rather than by flushing out or wiping out the abdomen. Continual rectal injections of saline were of great importance. In treating localized peritonitis, whether suppurative or not, peristalsis was to be arrested. It hindered the localizing of the inflammation. Thus all laxatives were to be avoided, a semi-starvation diet (albumen water), and an opiate (in the form of Dover's powder) given. Enemata were sufficient for evacuation of the bowels. Light poultices and the Fowler position should be used. Until acute symptoms had subsided this line of treatment should be carried out, and surgical interference not entertained unless the abscess point or other clear indication developed. When abscess formed time should be given for the formation of adhesions to the parietal peritoneum or for the pus, as invariably happened, to lose its virulence. Taking the statistics of the Western Infirmary for ten years: Between 1898 and 1907, cases of appendicitis, 1,007; cured, 889; died, 118; mortality, 11.7 per cent. Sir George Beatson was responsible for 147, of which 141 were treated by the expectant method and operated on afterwards by the interval operation. These 141 all recovered; 6 died, 2 without operation, giving a mortality of 4 per cent. Deducting his cases from the others, 860 cases were treated by the other surgeons. Of these 860, 748 were cured and 112 died, showing a mortality of 13 per cent. The statistics of the Glasgow Royal Infirmary gave an even higher mortality. He pointed out that perforation and gangrene of the appendix did not of themselves justify operation unless accompanied by general suppurative peritonitis, by no means a necessary sequela. Dr. T. K. DALZIEL described the ideal appendix as funnel shaped. This condition generally obtained in children, but, especially towards puberty, the development of the muscular tissue of the colon, together with the usual fold of mucous membrane, tended to cause an abnormal contraction, whereby secretion was retained. This explained the relative infrequency of appendicitis in children and its frequence at puberty. This increased tension

would either cause the obstruction to yield or a series of pathological changes would be set up which usually led to suppuration. He classified suppurative appendicitis as follows:

1. Suppurative catarrh, generally with inflammation of the walls and some fibrinous peritonitis, the cavity of the organ distended with pus.
2. Intramural, with small discrete abscesses scattered through the tissue.
3. Abscess round the appendix shut off by adhesions. The locality of the organ and previous attacks favoured the formation of adhesions. The constitutional disturbance might be remarkably slight. The abscess might burst into the peritoneum, the bladder, the ureter, or faecal fistula. The usual route was fortunately into the intestine. Such cases had prolonged convalescence and frequent recurrences. Another rarer danger was septic thrombo-phlebitis followed by septicaemia and pyaemia. During the past three years Dr. Dalziel had six deaths following localized abscess; in no case had death been due to peritonitis following operation.
4. General suppurative peritonitis. Prognosis could be best made from the pulse and from the general facies. The issue largely depended on the organism present. Streptococcal infection was usually fatal. Infection by *Bacillus coli* was hopeful, mixed infection with *Bacillus coli communis* and staphylococci was intermediate, and was frequently followed by delayed secondary localized abscesses.
5. Suppuration in the lymphatic glands, infection from appendix a rare condition. Complications result from bursting of the glands.

Regarding treatment, there was no question in the cases where pus was confined to the cavity of the appendix. Immediate excision was the only safe course. Immediate operation in suppurative peritonitis was also demanded. When abscess had formed, apparently localized, it might sometimes be left till adhesions had formed, but there was a considerable danger of general peritonitis, thrombophlebitis, septicaemia, injury to internal organs, and the removal of the appendix was more difficult, and so recurrences might take place. Pus, he thought, should be evacuated as early as possible, and, with care, the peritoneal cavity could be quite well protected. He made a fairly free incision, carefully protected the peritoneal cavity with gauze, and carefully swabbed out any remaining pus, concretions, or dead tissue. If necessary, the wound should be packed with gauze for four days. Regarding the statistics quoted by Sir George Beatson, there had been no mention of the stage of the disease. Probably many were cases of general septic peritonitis, the hospitals being the dumping ground for dying appendix cases. Dr. DONALD MACPHAIL said that appendicitis from the point of view of the hospital surgeon, who wrote about the disease, would appear to be an entirely different disease from appendicitis as it was met with in practice. To the former it was a dangerous and deadly disease, calling for prompt and heroic measures; to the latter, it was a very manageable ailment. The truth probably lay between these opposing views. During twenty-seven years of general practice he had had many cases of appendicitis. None had been operated on and none had died. No case should be treated light-heartedly. He had frequently seen cases—which he had regretfully left without surgical interference, because under the circumstances that was impossible—give very satisfactory results. Some would insist that opium should never be given. He thought this cruel, and provided it was given merely to diminish suffering, not to narcotize, it was not harmful. He gave small and frequent doses of liq. morph. with tincture of belladonna, combined with mag. sulph., also in small doses. The latter kept the bowel and its contents in a more healthy condition, preventing stasis and the formation of scybala, by encouraging both secretions and peristalsis within safe and beneficial limits. With Sir George Beatson, he deprecated too much zeal and haste in operating, and thought that many cases would get well without even delayed operation. Mr. MAYLARD advocated early operation, provided all precautions were taken to protect the general peritoneal cavity. After opening the abdomen he carefully packed off the surrounding parts, wiping away the pus with pledgets of gauze as it oozed from its cavity, until the latter was quite dry; sought for and removed the appendix, freely swabbed out the pus cavity with pure carbolic acid, dusted copiously with pure iodoform, and finally stuffed and drained. He emphasized the importance of thoroughly removing all pus before attempting to break down adhesions to liberate the appendix. Early removal in all cases of acute appendicitis should be the usual practice, and they would then never hear of appendicitis with abscess. Dr. RENTON and Dr. KNOX also advocated early operation. Mr. PRINGLE thought the time element was of great importance, and was another point in favour of early operation. He had found vaccine treatment useful in diminishing infection. Opium should not be used unless an operating surgeon was not available.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 18th, Dr. A. FORBES, Vice-President, in the chair, Dr. RALPH P. WILLIAMS, School Medical Officer of the city, read a paper on *Medical inspection of school children in Sheffield*. After describing the objects and history of medical inspection, the necessity for some organization of this kind was pointed out, resulting from (*a*) the inquiries of the various Royal Commissions which had recommended it, (*b*) the large amount of physical defects found in school children by the earlier investigators, and (*c*) the revelations in connexion with recruiting for the Boer war. The work done in Sheffield before the passing of the Education (Administrative Provisions) Act of 1907 was next described. The children then attending the schools were inspected (66,590 in number). Of these 5,475 were examined, and 4,741 letters were sent to parents suggesting that treatment should be obtained from the family doctor. Second letters were sent to those parents who had disregarded the first. As a result of the letters sent about 45 per cent. of the children obtained treatment. The conditions found included 2,066 cases of defective vision, 385 sore eyes and lids, 1,141 adenoids and enlarged tonsils, 130 discharging ears, and 151 rickets. The schedule being used under the new Act was discussed, it being found by experience that about forty children per day could be examined by a whole-time medical officer. The question of verminous children was fully dealt with. Three whole-time school nurses had been appointed, and their work was supplemented by the large staff of women sanitary inspectors. In cases where no improvement took place after two visits from the nurse the home was visited by the school medical officer and the parents warned, or if the state of the home was very bad the children were "removed to a place of safety" on a warrant obtained from the magistrate (Section 10, Prevention of Cruelty to Children Act, 1904). Five families of children had been so removed since last July, the parents being prosecuted for neglect, sentences varying from six months' to one month's imprisonment having been passed. The arrangements for treatment were mentioned. The Education Committee subscribe to the hospitals, and by this means "recommends" were provided for children (after full investigation as to the parents' means). Mr. MILES H. PHILLIPS read the notes of a case of *Dystocia due to excessive development of the child*. The head was born unassisted, in the unreduced right occipito-posterior position. Delivery of the trunk was only effected after amputation of the head and both arms, evisceration, and the application of the cephalotribe to the spine. The child weighed 16¾ lb. The excessive bulk was chiefly due to a deposit of dense subcutaneous fat, which was 1¼ in. thick over the loins. Pregnancy had been prolonged three weeks over the calculated time. The child was living when the head was born. The mother, fortunately, had a large pelvis, and her previous children had been born naturally. Dr. ARTHUR HALL showed two cases of *Bronchiectasis*. One followed tooth extraction, the acute symptoms of septic bronchitis subsiding after a tooth stump had been vomited. The second was an old case of phthisis where the physical signs had remained the same for at least seven years. The cardiac impulse was in the axilla. In addition to the signs of cavity at the left base, there were crepitations synchronous with the heart-beat. He also showed a case of *Herpes zoster* of the second division of the fifth nerve.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 19th, Dr. W. H. CHEETHAM, who was in the chair, read a paper on the *Medical inspection of school children*. Dr. E. F. TREVELYAN read a paper on *Birth palsy*, especially in reference to the distribution of the paralysis and prognosis. Mr. H. LITTLEWOOD

showed a *Columnar-celled carcinoma* growing from the anterior surface of the sacrum and invading that bone. The tumour was felt by rectal examination as a smooth elastic mass the size of an egg, and was entirely unconnected with the bowel. No other growth was recognized in the ovary and elsewhere, and the tumour was regarded as originating from the post-anal gut. The patient was a woman, aged 63, who had suffered from agonizing sacral and coccygeal pain for several months, dating back to an injury—a fall upon the lower part of the back. Mr. W. THOMPSON showed (1) a specimen of *Subacute necrotic pancreatitis* from a woman aged 44. When seen there had been five months' history of abdominal pain and vomiting, and a transverse tumour could be felt in the lower epigastric region. At an exploratory operation the tumour was found to be pancreatic, fat necrosis was observed, and the gall bladder, which contained stones, was drained. There was considerable pyrexia. The patient died twenty-three days after the operation. At the *post-mortem* examination there was destruction of the head and part of the body of the pancreas, with suppuration burrowing into the root of the mesentery. The left half of the pancreas was apparently normal. (2) A patient, a man aged 46, from whom about *three-quarters of the stomach had been removed*. He was extremely emaciated, but was now improving, eating chicken, etc., fourteen days after operation. There was extensive malignant growth of the pylorus extending along both curvatures. There was massive enlargement of the subpyloric glands, those along the coronary arteries being also involved. (3) A *Recurrent myeloid sarcoma* from the region of the coccyx, the growth being the size of a small cocoanut. The coccyx had been removed two years before; signs of recurrence were noted six months ago. Dr. E. F. TREVELYAN showed a man, aged 52, with a slight *Residual paralysis* in the left hand as a consequence of a total brachial plexus paralysis due to a dislocation of the left shoulder. As there had been no improvement for nearly a year, this paralysis was looked upon as permanent. Mr. A. S. GRÜNBAUM showed specimens of extensive *Idiopathic and traumatic pontine haemorrhage*—one, from a man aged 65, setting in spontaneously during work, the other, from a man aged 71, the result of being knocked down by a tramcar. Dr. MAXWELL TELLING and Mr. J. F. DOBSON showed an infant, 12 months old, in whom a large *Pancreatic cyst*, noticed since the age of 9 months, had been drained successfully. Cases and specimens were also shown by Mr. JOHN W. HYSLOP, Mr. A. L. WHITEHEAD, and Mr. MICHAEL TEALE.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting held on February 11th, Mr. T. H. BICKERTON, President, in the chair, Dr. W. B. WARRINGTON described a case of *Myasthenia gravis* in a woman aged 32 years. The ptosis often so readily seen was not marked, though it could be produced to some extent by fatigue. There was extreme weakness of the masseters, which gave the characteristic myasthenic electric reactions. In other ways the case was quite typical. Dr. GLYNN referred to a case which commenced with giddiness, double vision, and ptosis, the latter being transitory. There was considerable loss of voluntary muscular power of the legs after exercise or excitement, and death occurred in twelve months from bulbar symptoms, these developing and proving fatal in four days. Drs. MURRAY BLIGH and ERNEST GLYNN read a note on the *Diagnosis of typhoid fever* by bacteriological examination. Their method was based on lines suggested by Coleman and Buxton, of New York, particularly in the employment of sterilized ox bile medium. In 8 out of 15 cases of typhoid examined in the second and third week they obtained positive results. The method proved of distinct value in 2 cases in which the nature of the disease was obscure. Mr. MONSARRAT read a paper on *Cancer of the breast*. He discussed the difficulties of early diagnosis. He described the extent of the operation undertaken in 37 cases and their after-histories. There was no recurrence in 20 cases during a period extending from five years to one year. Recurrence had taken place in 14 cases during periods ranging from four years to within one year. Mr. PAUL referred to the importance of removing breasts affected with intractable involution mastitis before they became malignant, and the great value of rapid sections. He thought the modern operation gave decidedly improved results. Mortality from the operation was very low. He had removed the breast over 200 times during the last five years without a death, and had no death since 1901. In thirty years he had had only four deaths from breast operations—two from sepsis and two from acute mania.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At a meeting on March 4th, Dr. COWAN delivered an address on arterio-sclerosis, first describing the pathological changes which occur in the vessels and constitute this condition. With reference to the kidneys, he pointed out that arterio-sclerosis was most common where on *post-mortem* examination the small red kidney was found. It was also common with the small white kidney, but infrequent with the large. Renal disease might, however, be secondary to arterio-sclerosis. Another secondary condition of serious import was fibrosis of the heart muscle, which followed upon sclerosis of the coronary arteries. Emphysema of the lungs also occurred readily when the vessels were sclerosed. With regard to etiology, arterio-sclerosis resulted from long-continued high pressure in the blood vessels; in this disease all the vessels were affected and it thus differed from atheroma. Referring to the Riva-Rocci sphygmomanometer, he considered a single observation of the blood pressure of no value. A continuous chart of the patient's blood pressure was of value, but from this record alone the patient's general condition could not be estimated. For example, with a deterioration in the patient's general condition, the blood pressure might either be rising or falling. The symptoms resulting from arterio-sclerosis might be classed as either pulmonary, cardiac, renal, or cerebral. From pulmonary disease resulted dyspnoea, orthopnoea, or irregular breathing, and from cardiac insufficiency, oedema or dropsy. Headache, often associated with vomiting, was caused by renal inadequacy. *Petit mal* was one of various cerebral symptoms which might ensue. From arterio-sclerosis also continuous cardiac pain or attacks of angina pectoris might result. The aim of treatment should be to eliminate poison from the blood and prevent stress.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A meeting of this society was held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on February 11th. The first portion of the evening was devoted to an exhibition of medical and surgical cases, followed by two short papers by Mr. A. S. PERCIVAL and Mr. R. J. WILLAN. Mr. Percival's subject was a *Pathological suggestion, based on electrical analogy*; that of Mr. Willan was some *Practical experiences with the urethroscope, cystoscope, and catheterization cystoscope*. The following were among the cases shown:—Dr. DRUMMOND: Two cases of *Musculo-spinal paralysis*; three cases of *Hemiplegia* and *Myasthenia gravis*. Sir THOMAS OLIVER: *Innominate aneurysm; Lymphadenoma; Fibroid phthisis*; and *Aortic incompetence*. Dr. BEATTIE: *Locomotor ataxia*, with anterior tibial peripheral neuritis; *Syphilitic aortitis*, with fusiform dilatation of the arch and aortic regurgitation; *Splenomedullary leukaemia treated by exposure to x rays; Acute transverse myelitis* in a boy 14 years of age; *Hydrocephalus*; and *Catarrhal jaundice due to infective choledochitis*. Dr. W. E. HUME: *Splenomedullary leukaemia treated with x rays; Hodgkin's disease; Pseudo-hypertrophic muscular paralysis; General paralysis of the insane; Pernicious anaemia*, showing great improvement by open-air treatment; *Syphilitic spinal meningitis* in a man aged 56, the infection being acquired six years ago. Dr. HORSLEY DRUMMOND: Cases of *Heart disease*. Dr. PARKIN: *Disseminated sclerosis; Mitral stenosis; Winged scapula; Charcot's hip-joint*; and *Fibroid phthisis*. Dr. BOLAM: *Pityriasis rosea; Scleroderma; Hydroa oestivale; Favus* (two cases), and *Tinea barbae*. Mr. RUTHERFORD MORISON: An old man with a *Gluteal aneurysm* which was being cured by injections of tinctura ferri perchlor. into the sac; and a case after the repair of a *Ruptured duodenal ulcer* followed by a gastro-enterostomy. Mr. JOHN CLAY: An elderly female with an *Obscure pulsating tumour at the root of the neck*, which was *probably an aneurysm of the first part of the subclavian artery*. Mr. W. G. RICHARDSON: A young female from whom he had removed a false palate and tooth from the gullet by *Oesophagotomy*. Mr. J. V. W. RUTHERFORD: Two cases where large areas had been successfully skin-

grafted by the *Method of Thiersch*. Mr. A. M. MARTIN: An *Epithelioma of the heel; Sarcoma of the leg;* and a hugh *Intramuscular lipoma of the thigh*. Mr. CLAY: *Dislocation at the hip-joint* reduced five weeks after injury; the patient was allowed to get up on the third day, and was now in full work.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting held at Liverpool on February 19th, Dr. J. W. MARTIN (Sheffield), the President, in the chair, Dr. J. J. O'HAGAN (Liverpool) showed a *Fibromyomatous uterus*, with bilateral ovarian dermoid cysts, which had been removed by total hysterectomy. Dr. J. E. GEMMELL and Dr. LEITH MURRAY (Liverpool) showed (1) *Myxofibroma of the vagina;* (2) *Sarcoma of the great omentum*, which had presented a soft, solid, freely moveable tumour in the left hypochondrium. It could be pushed into the pelvis and had simulated a dislocated spleen. It was easily excised. There was no ascites and the other abdominal organs were normal. Dr. D. LLOYD ROBERTS (Manchester) showed a specimen of *Cystic fibromyoma of the uterus*, and read notes of a case of *Caesarean section*, performed, before the onset of labour, on account of a flattened pelvis (C.V. 3 in.). Craniotomy had been performed on three previous occasions. Involution of the uterus was slow, and on the eighth day symptoms of sepsis appeared. The uterus was explored and a large clot of blood removed. Recovery was then uninterrupted. In closing a discussion, Dr. Lloyd Roberts stated that he always, if necessary, dilated the cervical canal before suturing the uterine incision, that ergot was given during the operation, and that, in his opinion, the retention of blood clot was due to pressure of the lower uterine segment against the promontory. Dr. Lloyd Roberts also showed a *Recurrent tumour of the vagina*, enucleated piecemeal from a woman of 43. Microscopically, it consisted chiefly of fibromyomatous tissue, though one part suggested sarcoma. Dr. J. E. GEMMELL stated that, nine years previously, he had enucleated a vaginal growth the size of a Jaffa orange from the patient. Clinically he had considered it a sarcoma, but microscopically it had been described as a degenerating fibroid. Dr. G. W. FITZGERALD (Manchester) showed the specimen and read notes of a case of *Primary carcinoma of the vagina* occurring in a nullipara aged 26. The ulcerated growth, which occupied the left fornix, was freed from below, and then removed, together with the uterus, by the abdominal route. The patient made a good recovery. Section showed that the growth—an epithelioma—though invading the cervix, was not connected with the mucous membrane of the cervical canal. But it might possibly have arisen from the epithelial covering of the portio. Dr. H. R. CLARKE (Manchester), in a paper on *Cavernous conditions occurring in the uterus*, pointed out that the myometrium of the infantile uterus consists of a network of fibro-muscular tissue enclosing large cavernous spaces, which are lined with endothelium, and filled, in most of his specimens, with blood. During development arteries extend from the fibrous trabeculae into those spaces invaginating the venous wall, and producing, in the early stages, a condition which the author likened to the corpus cavernosum of the penis. The arteries grew more rapidly than the venous spaces, and so, by this process of condensation, the dense condition of the adult myometrium was reached, and the arteries of the adult uterus came to be surrounded by venous spaces. The author suggested that the angeiomatous changes seen occasionally in uterine fibroids might possibly be dependent upon this developmental process. The paper was discussed by Dr. BLAIR BELL, Dr. LLOYD ROBERTS, and Dr. A. W. W. LEA. Dr. CLARKE replied.

ONE of the euphorbias in Queensland, the *Euphorbia pilulifera*, is commonly called the Queensland asthma plant; it has a local reputation for curing that disease, and several pharmaceutical preparations of the plant are sold in Australia. Recent chemical examination has shown that the green plant contains 79 per cent. by weight of water and 3 per cent. of ash, the amount of vegetable matter being therefore estimated at 18 per cent. The dried plant contains an alkaloidal substance, in the proportion of about 1 part in 1,000, and a glucosidal substance in a proportion of not more than 4 parts in 1,000; it is thought possible that one or both of these may have active properties.

Reviews.

DIABETES.

THE lectures which were delivered by Dr. PAVY[1] before the Royal College of Physicians during last November and December contain a lucid presentation of his theory of the physiology of sugar absorption. If we may venture to attempt to do justice to these views in a brief summary, it may be said that Dr. Pavy holds that when sugar circulates with the blood it escapes by the kidney, and that the normal quantity of sugar in the urine corresponds to the normal amount of sugar in the blood. It is true that the normal glycosuria is too slight to be revealed by Fehling's test, but its existence is hardly any longer disputed by competent authorities. When sugar is injected into the blood it appears at once in the urine. Dr. Pavy considers these facts inconsistent with the current doctrine that sugar is poured into the circulation as glucose and travels with the blood to the tissues, where it is normally assimilated. If this were a physiological process he holds that glycosuria would always occur, and he thinks the conclusion inevitable that the sugar must travel in the blood in some combined form. He supposes the molecule of bioplasm to be provided with innumerable arms for junction with suitably constructed foodstuffs, and that in this way it can carry both carbohydrate and protein to the tissues, where they are detached and utilized. He explains phloridzin glycosuria, in which, as is known, there is no hyperglycaemia, by supposing that the renal epithelium has the power of detaching the carbohydrate molecule from its side-chain attachment as the blood passes through the kidney. While admitting that the liver plays an important part as a storehouse of glycogen, he points out that the results of Eck's fistula, in which the portal vein has been successfully anastomosed to the inferior vena cava, where the liver is entirely excluded from the circulation without the occurrence of glycosuria, proves that the liver cannot be the important physiological barrier to prevent glycosuria which current physiological theories assume. He believes it must be admitted that sugar disappears during its passage through the intestinal wall, and we understand him to suggest that the theory outlined above affords an adequate explanation of its disappearance and its carriage to the tissues. But Dr. Pavy also points out that the enormous increase of lymphocytes in the intestinal epithelium and lacteals has never received the attention it deserves. He regards these as freshly proliferated rapidly growing bioplasm, formed in the presence of suitable pabulum, and he believes that it is in them that the foodstuffs travel to the circulation, where the lymphocytes disappear by a process of autolysis, having meanwhile effected by ferment action the conversion of the nitrogenous results of digestion into albumens and globulins. Glycosuria results whenever this process fails, and is in proportion to the extent of the failure. Thus there may be a larger supply of carbohydrate foodstuff than can be transported by the existing means, which may be normal as in experimental glycosuria produced by feeding with excess of glucose, or slightly diminished as tends to be the case as age advances, or decidedly and greatly diminished in the various degrees of diabetes. He thinks that the pancreas may secrete a substance which favours the taking on of the carbohydrate atom, or, to use the language of Ehrlich, the pancreas secretes the amboceptor, and that in this way the relation of pancreatic disease to glycosuria is to be explained. We should not do justice to Dr. Pavy if we omitted to say that his lectures contain much more than the exposition of this purely theoretical doctrine. He has some exceedingly useful remarks upon the worthlessness of many so-called diabetic foods, and makes a decided point against Professor von Noorden, who has extolled his "oat cure" by comparing the results he obtained from it with those observed when patients were taking the bread made by Rademann of Frankfurt. Some of this maker's diabetic white bread examined by Dr. Pavy in June, 1900, contained 73.4 per cent. of starch, while "*Zwieback*," examined in March, 1898, contained 72.1 per cent. of starch, and another sample examined in March, 1902, contained 64.8 per cent. of starch. More recent examinations in the early part of last

[1] *Lectures on the Pathology and Treatment of Diabetes Mellitus.* By F. W. Pavy, M.D., LL.D., F.R.S.

year gave somewhat better results, but these figures show that no scientific conclusions should be drawn from any comparisons based on the assumption that these foods contained little or no starch.

Professor NAUNYN has written for the use of practitioners a small book giving the necessary data for prescribing diabetic diets,[2] and it would be well if some one would publish its equivalent in English, *mutatis mutandis*, as there are necessary changes to be made in dealing with English patients and with English articles of food. The first table gives the percentage of fat in different foodstuffs, such as meat, fish, butter, bacon, sausages, eggs, and cheese. The second gives the percentage of fat and sugar in milk, cream and milk preparations; and the third gives the carbohydrate percentage of various farinaceous substances, vegetables, and fruits. In the fourth section there is information, not in tabular form, on the sugar contents of alcoholic drinks. Then follows a table on the value, in heat units, of different articles of food; and a specimen diet, containing 2,700 heat units, for a patient weighing 150 lb. (75 kilos). In conclusion, a brief account of the principles upon which diabetic diets should be constructed is given, and a bill of fare arranged for each day of the week, with the quantity and the heat value of every item of the diet.

The fasciculus on diabetic coma in Professor Albu's System of Treatment could not have been entrusted to better hands than those of Dr. A. MAGNUS-LEVY,[3] who has done so much good work in this and allied departments of medicine. The text opens with the following quotation from Frerichs: "Every diabetic must sooner or later, in consequence of loss of health and strength, run a risk of sudden and unexpected death. He is like a weary wanderer in a thick mist following a narrow path by the side of a roaring torrent, into which he is in danger of falling if he anxiously quickens his pace or strikes against a stone in the way." This by no means exaggerates a danger which cannot be foreseen or prevented by any care on the part of the patient or the practitioner in attendance. The author quotes a good illustrative case from Spitzer: A patient with slight diabetes under treatment at Carlsbad thought some one was coming into his bath-room, and in rushing to bolt the door fell and broke his collar-bone. He became very excited; the sugar went up to ten times what it had been; diacetic acid and acetone, which had been absent, appeared in large amounts, and in four days he died of coma. An even better illustration of the slight disturbance which may suffice is the case given by von Noorden of a merchant who presided for three hours at the general meeting of a large company; an hour later he became comatose. The treatment of diabetic coma upon which Dr. Magnus-Levy insists is the injection of sodium bicarbonate in 3 to 5 per cent. solution into the veins; the quantity of the injection should be about a litre, and it should be run in slowly, in from a quarter to half an hour. He thinks enemata are not so efficient, as they are not retained sufficiently long. If the patient shows any sign of recovery so that he can swallow, a teaspoonful of sodium bicarbonate dissolved in water or milk should be given every hour or half-hour, and he should be encouraged to drink large quantities of milk or soda water or mineral water. The great diuresis thus produced helps to clear out the acid. If the patient recovers, the diet for the first week should contain carbohydrates, and the quantity of sugar should be regarded as of secondary importance, but after this he must return to the diet on which he formerly was. Experience shows that it does not do to relax the dietetic treatment. The last part of Dr. Magnus Levy's work discusses the diet to be used in severe cases of diabetes; he is emphatic as to the need for taking large quantities of fat, and he advocates the use of alcohol, 2 oz. to 3 oz. of spirits daily. He thinks von Noorden's oatmeal diet worth a trial, although it is difficult to find an explanation. He also urges that the patient should continue to use sodium bicarbonate regularly. The result of the treatment recommended, it is admitted, is not very brilliant. Naunyn has had five recoveries, all in children, and Grube one case in a man over 50. No doubt numerous slight cases of threatened coma have recovered under it, but such have recovered under all kinds of treatment, and the diagnosis must always remain in doubt.

[2] *Notwendigste Angaben für die Kostordnung Diabetischer. Zum Handgebrauch der Aerzte Zusammengestellt.* Von B. Naunyn. Jena: G. Fischer. 1908. (Roy. 8vo, pp. 18. M. 0.60.)

[3] *Das Koma Diabeticum und Seine Behandlung.* Von Dr. A. Magnus-Levy, Berlin. Halle a-S.: Carl Marhold. 1909. (Med. 8vo, pp. 54. M. 1.40.)

BIOCHEMISTRY.

THE idea of issuing monographs or separate chapters on biochemical subjects is excellent, and if all of those promised are as good as the first, the editors of the series, Drs. ADERS PLIMMER and HOPKINS,[4] will have no cause to regret their venture. It is a method of publication which might be followed with advantage in other rapidly growing branches of science, for each monograph can, if new editions are necessary, be issued independently of the rest, and the moderate price charged will enable those interested in one or more particular subjects, to get the most recent knowledge without having to pay for an expensive volume which may contain much of what is uninteresting to them, or which, owing to the scarcity of the demand, may not be fully up to date. Dr. BAYLISS'S original work on enzyme action is of the highest character; it is therefore fitting that he should have been selected to write the first monograph of the series. Even the elementary student of physiology knows the important part played by enzymes in the chemical transformations which accompany vital activity, but it is only within recent years that the laws of fermentation have been understood, because it is only within that time that convincing proofs have been adduced that the laws they obey are those of catalytic phenomena. So exact is the increasing knowledge that has followed this discovery that it is now possible in many cases to treat the subject mathematically. This, however, need not deter the student from reading the book, for the subject is dealt with in an admirably lucid manner, and the book can be most warmly recommended to all those desirous of obtaining the latest information on a subject the importance of which it is not possible to overestimate.

The editor of the *Handbuch der Biochemie*[5] is as good as his word, and the fasciculi of his book are appearing with great celerity. They are not published in the order in which they will subsequently be bound together, but the wise course is being pursued of printing the articles which are ready. The third fasciculus, for instance, begins volume ii, treating of the blood and lymph; the fourth and sixth fasciculi continue the first volume, although they do not complete it; and the fifth fasciculus starts the fourth volume, which deals with metabolism. It is unnecessary to repeat what we have already stated regarding the high standard aimed at, which is admirably maintained in the articles now before us. The later volumes deal with the more biological aspect of the question, the earlier ones with the more strictly chemical side. It may, however, be convenient for our readers and prospective purchasers of the various parts to enumerate the articles and their authors. In the fourth and sixth fasciculi Dr. F. Saumely completes his article on the proteins, and contributes three more on proteoses and peptones, animal ferments, and animal toxins respectively. Professor Abderhalden contributes an article on the hydrolysis of proteins, a subject which he of all others is qualified to treat authoritatively. The nucleo-proteins and their decomposition products are dealt with by Drs. A. Schittenhelm and K. Brahm. The third fasciculus, which consists of the first 160 pages of the second half of vol. ii, contains six articles; the first is on the physical chemistry of the blood, by Dr. R. Höber of Zurich; the second and third are written by Dr. P. Morawitz of Heidelberg, and deal with blood coagulation and plasma and serum respectively; the fourth is on lymph formation, by Professor R. Magnus of Utrecht; and the two last, on the chemistry of lymph, and on transudations and exudations, are from the pen of Dr. H.

[4] *Monographs on Biochemistry.* Edited by R. H. Aders Plimmer and F. G. Hopkins. *The Nature of Enzyme Action.* By W. M. Bayliss, D.Sc., F.R.S., Assistant Professor of Physiology, University College, London. London: Longmans, Green, and Co. 1908. (Royal 8vo, pp. 100. 3s.)

[5] *Handbuch der Biochemie des Menschen und der Tiere.* Edited by Dr. Carl Oppenheimer. Fasciculi 3 to 11. Jena: Gustav Fischer. 1908. (Sup. roy. 8vo, pp. (L. 3) 1-160, (L. 4) 321-400, (L. 5) 1-160. Pro. Lfg., M. 5.)

Gerhardt of Berlin. The fifth fasciculus deals with gaseous metabolism, and contains, in addition to an introductory note by Professor N. Zuntz, two articles on that subject by Dr. A. Loewy of Berlin. The seventh fasciculus continues and completes Dr. Loewy's article, Gaseous Metabolism, and contains also a chapter dealing with metabolism during inanition by Dr. Brugsch of Berlin. Fasciculus 8 brings us back once more to volume ii. It treats of the physical biochemistry of cells, and contains four articles—two by J. Loeb, one by K. Spiro, and one by M. Jacoby. The ninth fasciculus starts the first half of the third volume, and deals with secretory glands and their secretions. Thus F. N. Schulz deals with mucous glands, salivary glands, and saliva; J. Plesch with sputum, A. Bickel with the gastric juice, Th. Brugsch with the secretions of the small intestine, S. Rosenberg with the pancreas, and J. Wohlgemuth with the liver and bile. Fasciculus 10 contains a bit of volume ii and part of the second half of volume iii. Its articles are on the chemistry of transudations and of the blood-forming organs, by H. Gerhardt; on the connective tissues, by H. Aron and F. N. Schulz; on the chemistry of foods, by F. Tangl; and on digestion in the mouth and stomach, by E. S. Loudon. The eleventh fasciculus contains a batch of articles on metabolism, A. Magnus-Levy taking the carbohydrates, and, in conjunction with L. F. Meyer, the fats as well; whilst R. Rosemann deals with the much-disputed question of alcohol. Nine more parts are yet to come, but one can begin to see now the general plan of the book and admire the wide and far-reaching underlying ideas that have guided its editor.

CLINICAL DIAGNOSIS: NEW AND OLD.

Dr. J. Campbell Todd's *Manual of Clinical Diagnosis*[6] aims to present a clear and concise statement of the more important laboratory methods which have a clinical value and to be a brief guide book to the interpretation of their results. It is designed for the student and practitioner, not for the trained laboratory worker. It follows on the lines of the well-known textbooks of v. Jaksch and Simon, but, unlike them, it has the special virtue of shortness and compactness. The methods selected are the more practical, and of them preference is given to those which require the least complicated apparatus and the least expenditure of time. The value of the book is increased, and at the same time its shortness and simplicity assisted by a large number of excellent illustrations. The author claims that practically all the microscopic structures mentioned, all apparatus not in general use, and many of the colour reactions are shown in the pictures. The seven chapters include the use of the microscope, the sputum with the methods of its bacteriology, the urine with the use of the centrifuge, the blood with its research methods and coloured representations of stained films, the gastric and intestinal contents with coloured pictures of their test tube reactions, and animal parasites. The book may be heartily recommended.

A little less than two years ago we received the first edition of *Clinical Diagnosis*, by Dr. C. P. Emerson,[7] and now welcome the second, more especially as some obvious defects in the first have been corrected and much new matter incorporated. The volume is admirably adapted to the needs of the laboratory worker, and is well indexed. Moreover, the illustrations are not only very accurately drawn, but are most beautifully executed. As an indication of the change made in the second edition, it may be said that the author has found it necessary to rewrite fully half the work. Much new matter has been added, moreover, and we are pleased to note that this is concerned rather with the bacteriological investigations which have of late years made such rapid strides, than with the more refined investigations of chemical pathology. We had reason to complain of the overloading of the first edition with the latter to the neglect of the former, and are most willing to acknowledge that Dr. Emerson has corrected what was an obvious blemish in an otherwise admirable work by the inclusion of the bacteriology of the sputum and urine. Moreover, two most useful sections are contributed by Dr. Wm. L. Moss, the one giving a full and reliable guide to opsonic investigation, and the other a short but nevertheless correct account of the new method of substantiating the reaction of the body to bacterial infection—namely, by fixation of the complement. If only by reason of the inclusion of these two sections, the second edition is a great advance upon the first.

Dr. John C. da Costa, jun., has written a book entitled the *Principles and Practice of Physical Diagnosis*,[8] which, having regard to the limitations of the ground covered, may fairly be called exhaustive. It is of set purpose limited to a consideration of diseased conditions of the thoracic and abdominal viscera, and hence takes no account of diseases of the nervous system, blood, skin, or urinary system. As he says, Dr. da Costa chooses to make it deal purely with the theory and practice of physical diagnosis at the bedside with reference to the study of thoracic and abdominal lesions alone. It is so full of material, and almost always very good material, that it cannot be discussed in detail. To classify its subject matter on an academic basis it may be said that it is mainly concerned with clinical anatomy, the origin, mechanism, and significance of normal physical signs, and with a really thorough discussion of applied pathology and of diagnosis. It consistently interprets morbid objective clinical facts on the basis of pathological cause and physical effect. Methods of physical examination, including the more important instrumental procedures, are clearly described. It may remind some of Dr. Gee's well-known book, but is less sententious and much inferior in its literary style, which is often ponderous and involved. It contains many most excellent illustrations. It includes reference to recent methods, not only well-established ones like those of sphygmomanometry, but such as is called in the book "erioscopy"—the digestion *in vitro* of coagulated pleuritic fluid followed by centrifugalization and subsequent bacteriological examination, a recognized method in the diagnosis of tuberculous pleurisy. By way of adverse criticism it might fairly be said that the book is overloaded, that it contains too much reference to named varieties of signs—for example, on page 455 there are no less than four: to wit, Drummond's, Sansom's, Glasgow's, and Galvagni's, all in the space of eight lines—and at the same time that there is not enough of critical appreciation of their significance or validity or the lack of it.

The appearance of a third edition of Dr. Leslie Thorne Thorne's little book on *The Nauheim Treatment of Diseases of the Heart and Circulation*[9] is sufficient indication that it has proved useful. The chapters on the preparation of the baths and the administration of the exercises—that is to say, the whole of the practical and special matter—has been revised. The photographs illustrating the exercises are very helpful in following the description in the text, and with their aid it should be possible for any one to carry out the instructions. The record of some cases illustrating the success of the treatment completes the volume.

TUBERCULOSIS, TREATMENT AND PATHOLOGY.

The practical results of the world-wide campaign against consumption cannot as yet be estimated, but the campaign goes on with vigour, and the series of lectures delivered by Dr. Louis Rénon at the Hôpital de la Pitié in Paris[10] proves that the subject is being pursued with energy in the French schools. Essentially practical in their scope, they present the matured experience of their author, together with his shrewd analysis of contemporary teaching, expressed in clear and simple language, which, to the English reader at any rate, adds in no small degree to the

[6] *A Manual of Clinical Diagnosis.* By J. Campbell Todd, M.D. Philadelphia and London: W. B. Saunders Company. 1908. (Post 8vo, pp. 319; 131 illustrations. 10s.)

[7] *Clinical Diagnosis: A Textbook of Clinical Microscopy and Clinical Chemistry for Medical Students, Laboratory Workers, and Practitioners in Medicine.* By Charles Phillips Emerson, B.M., M.D., Associate in Medicine, The Johns Hopkins University. Second Edition. Philadelphia and London: J. B. Lippincott Company. (Roy. 8vo, pp. 693, 5 plates and 126 figures, some coloured. 21s.)

[8] *Principles and Practice of Physical Diagnosis.* By John C. da Costa, jun., M.D. Philadelphia and London: W. B. Saunders Co. 1908. (Med. 8vo, pp. 548, 212 illustrations. 15s.)

[9] *The "Nauheim" Treatment of Diseases of the Heart and Circulation.* By Leslie Thorne Thorne, M.D. Third edition. London: Baillière, Tindall, and Cox. 1909. (Cr. 8vo, pp. 94, 58 illustrations. 3s. 6d.)

[10] *Le Traitement Pratique de la Tuberculose Pulmonaire.* By Dr. Louis Rénon, Physician to the Hôpital de la Pitié, Paris. Paris: Masson et Cie. 1908. (Fcap. 4to, pp. 260.)

pleasure of their perusal. The complete failure of all attempts to destroy the tubercle bacilli *in situ* has been followed by no less vigorous efforts to neutralize the poison which they produce by means of serum and tuberculin and certain drugs. For almost all of these an initial success of something between 60 and 70 per cent. has been claimed by those who have used them in the first instance, but it is only too obvious that not one of them has hitherto achieved such results in the hands of the profession at large as to justify their general adoption. This forms a striking contrast with the universal recognition that welcomed the introduction of the antitoxin of diphtheria. Dr. Rénon points out that the normal ratio of improvement under the simple hygienic treatment of consumption stands at nearly the same figure as that claimed for any specific method, and if the influence of the psychic element be excluded there remains a very small balance in favour of the antituberculous properties of any of the suggested remedies. After close examination of all those that have been recently introduced, many of them within the last twelve months, he does not speak enthusiastically of any. The tuberculin prepared at the Pasteur Institute would appear to be giving good results, but the author wisely maintains that at least four years' experience of it is needed before trustworthy conclusions can be drawn. Of the uses of psychotherapy he has much to say, and his close observation of the state of mind of the French consumptive at various stages of his illness is very interesting. Much attention is also paid to the question of personal hygiene, and the restrictive effect of rigid rules applied to all cases is condemned. The enforcement of a "time-table" is perhaps necessary in a large institution, but in private the personal needs of individual patients must be studied. In a lecture devoted to dietetic treatment the importance of co-operation between the doctor and the cook on the patient's behalf is demonstrated. This point is too little regarded in this country, where culinary matters are so seldom the subject of ordinary discussion. The growth of knowledge and of interest with respect to the phenomena of gastric digestion will doubtless bring the science of cookery more to the front in the near future. Dr. Rénon has no faith in the doctrine of excessive alimentation for consumptives, and, like some other recent authorities, throws considerable doubt upon the value of fat in the dietary, and, incidentally, upon the utility of cod-liver oil. He records an interesting and convincing series of experiments on guinea-pigs which go to prove that the addition of butter to a fixed diet caused marked lowering of their powers of resistance to the ravages of artificial tuberculosis, as against exactly similar experiments with sugar and gluten respectively. Of drug treatment he maintains that the primary consideration should be to do no harm. The value of calcium salts is extolled, and the uses of many drugs for the relief of symptoms are mentioned. Some of these will be unfamiliar to English readers. Faith in their efficacy both on the part of the patient and of the physician is regarded as the essential element of success. Climatic and other accepted lines of treatment are duly passed in review, and a chapter is devoted to the means of dealing with consumption when complicated by other morbid conditions. As a sound, common-sense account of the present state of the therapeutics of consumption we can cordially commend these very readable lectures.

Dr. BONNEY in *Pulmonary Tuberculosis and its Complications*[11] writes mainly from the clinical point of view, and primarily for the benefit of the practitioner rather than for the scientific inquirer. Colorado, where Dr. Bonney has gained much of his experience of the disease, furnishes good scope for clinical observation since it is much frequented by the consumptive in search of health. That Dr. Bonney has had much practical experience of the subject is apparent throughout the book, and gives it a special value. The illustrations are numerous and useful; by making use of photography to show the various types of chest conformation, and alterations in appearance due to disease, we get the idea of actuality which fits the text—the sense that we are sharing the results of the author's experience and not merely perusing a compilation from other writers. We may not always agree with the author's views or accept all his deductions, but it is useful and interesting to learn what his experience has taught him. Though the major portion of the book is essentially clinical, the preliminary chapters are devoted to etiological considerations. The review of the differences between the human and bovine types of the *Bacillus tuberculosis* may be noted as particularly lucid. A large amount, as appears to us an undue amount, of space is devoted to a general review of the methods of physical examination of the chest. That there is much concerning physical examination of which the average practitioner requires to be reminded as a preliminary to the clinical study of chest diseases may be admitted, but in the sixty-three pages here devoted to physical examination there is much which belongs to the earliest training of the clinical student, and therefore somewhat out of place in a special work on tuberculosis. There is a very good chapter, illustrated with an excellent series of *x*-ray photographs, on the assistance to be derived from the Roentgen rays in defining the lesions in pulmonary tuberculosis. Dr. Bonney is evidently amongst those who do not look to the radiograph to obtain the earliest signs of commencing tuberculosis in the lung, for he says (p. 252): "A structural lesion sufficient to show a distinct shadow change is often preceded by such subjective and objective signs as will warrant an unqualified diagnosis." A large part of the book is devoted to the complications which may arise in the course of pulmonary tuberculosis; the treatment of the primary disease and of the various complications is fully discussed. In the section on the treatment of haemoptysis, which is very sound in principles and very practical, we find with the more recent remedies which are advocated some traditional practices not now universally accepted. Amyl of nitrite is recommended—though in smaller quantities than we have found to be efficacious. On the other hand, the icebag applied to the chest and a strictly recumbent position for the patient in the routine fashion which used to be recommended have now been discarded by many practitioners. Dr. Bonney, however, notes that more importance may be attached to the position of the icebag over the cardiac area than over the supposed site of the haemorrhage. In this section there is apparently a misprint in the extract which follows, the word which we have italicized being obviously not what was intended. On p. 715 we read: "Conversation in the room should be strictly *enjoined*, the patient being addressed only when necessary." As it is expressly stated on the previous page that it is essential that no person should be allowed in the sick room besides the nurse, it is evident that conversation is not "enjoined." Dr. Bonney's book is one which should soon reach a second edition: this is our justification for picking out from so large a mass of good work some small subjects for criticism.

The discovery of the tubercle bacillus in 1882, and the instant confirmation of its universality, carried all before it, and the views of the older observers as to the so-called inflammatory origin of the disease were swept away with more or less contempt. Time, however, has served to show that the bacillary theory is not all-satisfying, and the physiological aspect of tubercle formation has been found worthy of study from other than the bacillary standpoint. Dr. CHARLES CREIGHTON in a recent book[12] has put forth the results not only of a careful analysis of the works of others in the same field, but also an interesting account of his own experiments and observations, extending over a considerable period, and giving evidence of very careful thought and study. Although there is unanimity in acceptance of the tubercle bacillus as the primary cause of tubercle, the whole subject of the histogenesis of the morbid changes is "beset with difficulties and paradoxes." The changes of opinion on the part of Koch himself respecting bovine and avian tuberculosis, the experiments of Wooldridge and others to prove that substances such as tissue fibrinogen might produce lesions indistinguishable, histologically, from those produced by the bacillus, all tend to prove that the whole truth is not yet known, and that the subject calls for closer examination. In this handsome volume, illustrated by explanatory drawings of microscopic specimens, Dr. Creighton accordingly sets forth a full account of the histogenesis

[11] *Pulmonary Tuberculosis and its Complications* By S. G. Bonney, A.M., M.D. Philadelphia and London: W. B. Saunders and Co. 1908. (Roy. 8vo, pp. 784. 30s.)

[12] *Contributions to the Physiological Theory of Tuberculosis.* By Charles Creighton, M.D. London: Williams and Norgate. 1908. (Roy. 8vo, pp. 252; 64 illustrations. 12s. 6d.)

of experimental tubercle, giving a historical epitome of the labours of the pre-bacillary pathologists, and a detailed account of his own observations on this part of his subject. He then considers the placental analogies of the tuberculous neoplasm as seen in the rodent, the third part of the work being devoted to an examination of human and bovine tuberculosis, especially in relation to its manifestations in lymph glands, serous membranes and meninges. The text of the whole may be found in the caustic observation of the author in relation to Koch's dictum that the discovery of the bacillus and not the histological conditions must in future be the criterion of tubercle. It is, he says, "a very simple criterion, much appreciated by those who have little time to think, or no great turn that way." That he has allowed himself plenty of time to think is evident throughout the work, but it is perhaps to be regretted that he has not found a simpler method of expression for his thoughts. The reader will need plenty of time to unravel some of them. To follow in detail the various steps of his argument is beyond the scope of an ordinary review, and it must suffice to record that the author regards the histological changes as being due primarily to the action of the poison upon the red blood cells. Thrombosis of minute vessels is the initial lesion, with plasmodial organization of the thrombi and a building up of a nuclear protoplasm from blood discs in the capillary walls and cavities of air cells when the disease affects the lungs. The neoplasm thus built up serves to get rid of the waste of disintegrated or reduced red blood corpuscles. The evidence upon which his arguments rest must be studied in the original work. Using the analogy of the placenta, he labours to prove that the histogenetic changes known to be produced by the injection of tubercle bacilli are the same as may be found under certain physiological conditions. Turning to the comparison of bovine with human tuberculosis, he emphasizes the histological peculiarities of the former and the initial occurrence of thrombosis—"but for the thrombosis there would have been no tubercle, and but for something in the blood there would have been no thrombosis." The whole work is worthy of the attention of investigators in the pathological laboratory, and although it may be thought that the accuracy of observations made so long ago as 1846 to 1889 may be open to question, still the specimens and drawings of that day remain in evidence, and modern observers cannot ignore the facts that they demonstrate, however much the interpretation may differ.

NOTES ON BOOKS.

THE *Minutes of the General Medical Council and of its various Committees for the year 1908, with fifteen appendices*,[1] has been issued. It is the forty-fifth volume of the series, and contains 664 pages, being 242 in excess of that for the previous year. The minutes of the General Council occupy 150 pages, of the Executive Committee 75 pages, of the Dental Committee 18 pages, and of the Branch Councils 17 pages; the remainder of the volume is occupied by fifteen appendices, being reports of various committees. There has also been issued the *General Index to the Minutes of the General Medical Council, of its Executive and Dental Committees, and of its three Branch Councils. Vol. XL to XLV (1903–1908)*,[2] which will be of great assistance in looking up references with regard to the procedure of the Council or its committees in any of the matters considered during the period. In 1903 an index of the Council's minutes for the previous years was published, and this proved so useful that it was decided to publish an index at shorter intervals; at the meeting of the Executive Committee on May 25th, 1908, it was resolved that the new volume should be kept in type and brought up to date year by year.

The Schoolmaster's Year Book and Directory for 1909[3] is the seventh annual issue. It consists of three parts. The first contains official particulars as to the administration of secondary education; a list of educational societies and organizations, including county education committees; condensed particulars as to universities, colleges, and medical and other schools; official particulars as to examinations and inspections; a chronicle of the year, containing events of the year in chronological order and also classified under subjects; and a review of the year, which discusses many subjects of interest to masters of secondary schools. The second part is a directory of schoolmasters, and the third an alphabetical list of secondary schools. In the first part there is a short section on examinations preliminary to the professions, which, judging by the particulars given as to medicine, must be pronounced quite insufficient as a guide either to master or parent.

[1] London: Spottiswoode and Co. 1909. Price 6s.

[2] London: Spottiswoode and Co. 1909. Price 2s. 6d.

[3] London: The Year Book Press (Swan Sonnenschein and Co., Limited). (Cr. 8vo, pp. 648. 7s. 6d.)

TEXTBOOKS OF MEDICINE.

Dr. ARTHUR R. EDWARDS of Chicago has written an excellent *Treatise on the Principles and Practice of Medicine*.[4] In form and scope it corresponds very closely with other well-known American textbooks on medicine, but among the characteristics which the author has endeavoured to impress on it are the blending of causative pathology with the consecutive clinical features of disease, the subordination of exceptions to what is usually found at the bedside, and the discounting of typical clinical pictures and other dogmatic generalizations. An unusual amount of space has been devoted to treatment, acting on the excellent general principle that the final object of the existence of a book on practice is the application of knowledge to the cure or alleviation of disease. Leaving generalities, it may be especially noted that the book contains a really helpful chapter on septic affections, several good and comprehensive tables of the differential diagnosis of disease, of which that referring primarily to typhoid fever is a good example, and many new and useful illustrations, among which may be mentioned the clumping of typhoid bacilli, Koplik's spots—of course, in colour—stained pneumococci, crystals of phenylglucosazon, plates of blood films illustrating on one page some eight or nine different blood diseases, and drawings of changes in the fundus oculi met with in different diseases, all also in colour. Not only are pneumonia and tuberculosis classed with the acute specific fevers, but acute rheumatism likewise. That this textbook will rank with the better may confidently be predicted.

The short *Practice of Medicine*[5] by the late Professor CHARTERIS has reached a ninth edition under the editorship of Dr. F. J. CHARTERIS. The original plan of the book has been maintained, but extensive alterations have been made so as to bring the book up to date. Several of the articles on fevers have been rewritten by Dr. A. Gray Banks, who has had special experience, and this co-operation is to the advantage of the readers of the book. In addition to substantial alterations in the old text, some forty morbid conditions have been for the first time included, such as mucous colitis, duodenal ulcer, heart-block, and fibrositis. These inclusions and other additions have naturally increased the bulk of the text, but by using a slightly larger page and by omitting the introductory chapter on general pathology the book is only some thirty or forty pages larger than the former edition, although its scope is so considerably extended. A feature of the book is an appendix consisting of a therapeutical index, a section on baths, one on vaccine treatment, one on prescriptions and prescription writing, and a series of formulae for different medicines. Following these is a section on the method of performing *post-mortem* examinations and a glossary of medical terms. The book is obviously meant as a primer for men beginning the study of medicine proper, and as such it may be recommended.

After an interval of seven years appears a new edition, the sixth, of the late Dr. Husband's handbook on the *Practice of Medicine*.[6] It is rather a rewriting than a revision that has been undertaken, but the well-known characteristics of the book have been preserved. Dr. ROBERT A. FLEMING has written the sections dealing with treatment and also all those dealing with diseases of the nerves; for the rest of the book Dr. R. F. C. LEITH is responsible. A sign of the times is that there is no separate section for diseases of the spleen. There is an excellent index.

[4] *A Treatise on the Principles and Practice of Medicine.* By A. R. Edwards, A.M., M.D. Edinburgh and London: W. Green and Sons. 1908. (Roy. 8vo, pp. 1328. 30s.)

[5] *The Practice of Medicine.* By the late M. Charteris, M.D. Ninth edition. Edited by F. J. Charteris, M.D. London: J. and A. Churchill. 1909. (Demy 8vo, pp. 704. 9s. 6d.)

[6] *Husband's Practice of Medicine.* Sixth edition. Rewritten and enlarged by Dr. R. F. C. Leith and Dr. R. A. Fleming. Edinburgh: E. and S. Livingstone. 1908. (Cr. 8vo, pp. 1165. 12s.)

METHODS OF QUACKERY.

ALL THE ILLS OF HUMANITY.

ALTHOUGH it appears that persistent advertising and some ingenuity suffice to enable many makers of quack medicines to foist one preparation on to the public as a remedy for many and diverse diseases, the large possibilities in professing to treat all complaints, on the patient's own description alone, by medicines "specially prepared" for the individual case, have not escaped attention. We have before us a paper-covered book of some hundred pages, entitled "The Ills of Humanity by Dr. James W. Kidd, Fort Wayne, Ind.," together with letters from "The J. W. Kidd Co.," sent to an applicant for further information, which furnish a striking example of the variety of quackery we have referred to, and appear to merit publicity.

We commence with some extracts from an advertisement which appeared not long ago in a London weekly paper:

Free! Free!

To the Sick and Ailing Everywhere.

The Cure for your Disease—Delivered Free—Free for the Asking—Free to You.

To the sick—the suffering—to every man and woman victim of organic disease—local trouble or broken general health—Dr. Kidd's offer of free treatments is given in the absolute faith and sincere belief that they can and will stop disease, cure it, and lift you up again to health and vigour. . . .

Rheumatism, kidney trouble, Bright's disease, diabetes, heart disease, partial paralysis, bladder troubles, stomach and bowel troubles, piles, catarrh, bronchitis, weak lungs, consumption, asthma, chronic coughs, nervousness, all female troubles, lumbago, skin diseases, scrofula, impure blood, general debility, organic vital ailments, etc., are cured to remain and continue cured. . . .

Will you let me do this for you—will you let me prove it—brother and sister sufferers? Are you willing to trust a master physician, who not only MAKES this offer, but PUBLISHES it and then sends the test and proof of his remedies without a penny of cost to anyone except himself? . . .

My home office is at Fort Wayne, Indiana, U.S.A., but for the benefit of my thousands of English patients, I have established an office in London. Please address Dr. James W. Kidd, "Box" No. 104, 96 St. John Street, Clerkenwell, E.C.

The advertisement is accompanied by a cut of a man's head, presumably the "master physician" in question. In the book referred to above, a portrait of "Dr. James W. Kidd" is given, and the two seem to represent totally different persons. In the book there is an introductory paragraph on "Dr. James William Kidd"; in it we read:

His profound knowledge of medicine, his remarkable power over disease, the honesty and wisdom of his business methods are best proven by his wonderful success. The enormous practice which he has built up in a comparatively few years is without doubt larger than that of any single physician in the world to-day.

The first and most important reason why you should patronize Dr. Kidd is because he has had a long and varied experience and the most gratifying success in his practice. During the past two years alone he has expended over three hundred thousand dollars in advertising his now justly famous remedies.

. . . at the present time, Dr. Kidd has among his resources remedies that enable him to treat successfully many diseases that are generally considered incurable.

Unlike the majority of physicians, Dr. Kidd does not confine himself to the methods of any one school of medicine. He does not hesitate to take advantage of any method or curative agency that promises to benefit his patients.

The book is principally occupied with a series of paragraphs on different complaints, rather over a hundred being dealt with; in the majority of cases the description leads up to reference to Dr. Kidd's treatment, or medicines, etc.

It appears that persons writing to "Dr. Kidd," or the company, receive a "Self-Examination and Consultation Blank." This commences with spaces for name, address, age, and occupation, and continues as given below. The words here printed in italics are the answers supplied by the hypothetical patient who has sent the Blank to us, and are supposed to refer to the case for which the medicines described below were sent:

1. Do you have rheumatism? *Yes.*
2. Do you have dropsy? *Yes for 2 years.*
3. Do you have scrofula or other blood poisons? *Yes.*
4. Do you have heart trouble? *No.*
5. What name do doctors give your disease? *Very difficult to diagnose.*
6. Is your hearing failing? *Yes.*
7. Does your nose discharge? *Yes.*
8. Is your sense of smell leaving? *No.*
9. Is there a dropping into your throat? *Yes.*
10. Do you cough? *Yes.*
11. Do you have pains in the chest? *Sometimes.*
12. Is your sputum (spit) streaked with blood? *No.*
13. Do you have asthma? *No.*
14. Is your appetite good? *Indifferent.*
15. Do you have a burning sensation in the stomach? *No.*
16. Do you have sour risings (belchings)? *Yes.*
17. Are you constipated? *No.*
18. Do you have diarrhoea? *No.*
19. Are you troubled with piles? *No.*
20. Is your liver torpid? *Yes.*
21. Do you have pain in the small of the back? *Yes.*
22. Do you have frequent desire to urinate? *Yes, very.*
23. Does your urine scald you? *Yes.*
24. Do you have pain in the region of the bladder? *No.*
25. Do you have to rise at night to urinate? *No.*
26. Have you any skin disease? *No.*
27. Of what nature? ——
28. Is your circulation poor (numbness)? *Yes.*
29. Are you troubled with neuralgia? *Yes.*
30. Are you nervous? *Yes.*

Further sections are added headed, "For Gentlemen only" and "For Ladies only," for information about disorders confined to one sex.

The answers given above were sent in, and the following was received in reply:

Diagnosis and Case Record.
By Dr. James W. Kidd, Fort Wayne, Ind.

For a complete description of your case, the probable results and my method of treatment, see pages 46, 99, 29, 13, 9, of the pamphlet "The Ills of Humanity," sent you under separate cover.

I find that you are afflicted with Rheumatism, Scrofula, Catarrh, Dyspepsia, and Gastritis.

Rheumatism MEANS an excess of uric acid in the blood.

Scrofula is a constitutional disease almost synonymous with tuberculosis.

Catarrh is an [excreting inflammation of the mucous membrane.

Dyspepsia (Indigestion) MEANS impaired secretion of pepsin and consequent imperfect digestion.

Gastritis MEANS catarrh of the mucous membrane of the stomach.

TAKE THE REMEDIES ACCORDING TO THE FOLLOWING DIRECTIONS:

One Tablet "A" before breakfast.
One Tablet "B" before dinner.
One Tablet No. 18 before supper.
One Tablet No. 7 after dinner and after supper.
One Tablet No. 45 on retiring.

This was accompanied by tablets marked "A," "B," and "18," three of each, four marked "45," and five marked "7"; also by a letter which is worth reproducing in full; this appeared to be lithographed, and although the name and address were in the same writing and the same ink, they showed evidence of having been added afterwards. It seems probable, therefore, that, although professing to be a personal letter, it is one in regular use. The "special interest in your case" is a familiar feature in quacks' letters.

Dear Friend:—

In compliance with your request received to-day I have prepared and forwarded to your address under separate cover, a sample of the remedies as promised. As the drugs are very expensive and we are required to send out hundreds of samples each day, it is impossible to send larger amounts. I trust, therefore, that you will take into consideration the fact that you cannot expect any remarkable results from the sample, but we desire mainly to call your attention to the neatness and elegance of our preparations, and their adaptability to the most delicate stomach, especially if you are one of the many who have had discouraging experience with the nauseating liquids, bitter and disagreeable powders, tablets and pills, usually found in drug-stores. I have taken special interest in your case, because I want a cured patient in your immediate vicinity. This is why I have gone to the trouble of writing you a personal letter.

After making a careful diagnosis of your case (see typewritten copy enclosed in this letter) I find that it is very complicated and severe, and will require several special remedies to effect a cure. These special remedies are very expensive, but I have decided to quote you a very low price on the complete treatment.

Believing that you are anxious to be cured at the earliest possible moment, to avoid unnecessary delay, I have to-day selected and will forward to your address upon receipt of your remittance of £1 the complete course of treatment.

Do not become discouraged if you have failed to obtain relief from local doctors or patent medicines. I am not a local doctor and the remedies I am offering you are not patent medicines,

but a course of treatment carefully selected to meet the requirements of your case.

I feel sure that I can restore you to health. In making this statement, I base my opinion on the results obtained in many similar cases that have come under my treatment. Much depends on taking the case in time. Every day's delay increases the difficulty of effecting a cure. I trust, therefore, that you will order at the earliest possible moment.

In ordering, please give me any further information concerning your case that you may deem important. If this develops the fact that any additional remedies are needed they will be included without extra cost.

Remember also, that you are entitled to my services entirely free while you are under treatment.

Awaiting your order and assuring you of my prompt and careful attention at all times, I remain,

Yours Very Truly,
Dr. JAMES W. KIDD.

It would appear that the "personal attention" given to each case is of the most mechanical nature. It is not necessary to point out the utter inadequacy as a means of diagnosis of the "Self-examination and Consultation Blank" given above; the answers on the Blank quoted were filled up in a manner which negatived the possibility of a diagnosis being made. This, however, presented no difficulty. Five diseases are specified to account for the symptoms, five headings in the pamphlet sent are referred to, and five kinds of tablets were sent. These tablets were analysed as completely as was possible with the small quantities sent, with the following results:

Tablet A (triangular) was coloured externally with a salmon-pink dye; the outer coating was of sugar, and below this was a rather thick coating of chalk, forming a very hard and resistant covering to the tablet. The decoated tablets weighed about 3¼ grains each; they contained 52 per cent. of sodium bicarbonate, and the remainder consisted principally of a bitter extract agreeing in all respects with extract of gentian; small quantities of potato starch and a substance of resinoid nature which could not be identified were also present. No other medicinal substance could be found.

Tablet B (triangular) was coloured externally with a bluish-purple dye; the coating and the material of the tablets agreed in all respects with Tablet A, and the two were evidently identical.

Tablet 18 (circular) was white; the coating was of similar composition to that of A. The decoated tablets weighed about 3.8 grains each; analysis showed the presence of about 1 grain of sodium benzoate in each, together with a small quantity of a greenish, moderately bitter resin which could not be identified, and a trace of oil of wintergreen. Faint indications were obtained of a trace of an alkaloid, but not enough to amount to positive evidence. No other medicinal substance could be found; the remainder was of "extractive" nature.

Tablet 45 (circular) was coloured externally with a pink dye; the coating was of similar composition to that of A. The decoated tablets weighed about 1.1 grain each; the chief constituent was aloes, and there was also present a very small quantity of ginger extract, and a small quantity of resin, which was probably jalap or scammony resin; also a moderate trace of alkaloid which was not the alkaloid of nux vomica, belladonna, or hyoscyamus, but was not present in quantity sufficient to be identified; the only other ingredient found was a little potato starch.

Tablet 7 (circular) was not coated. The average weight of these was 6.5 grains each, and they consisted principally of charcoal, with some sugar and a very little saccharin.

"These special remedies are very expensive"! (letter above).

The reply which was sent to this letter was not satisfactory to "Dr. Kidd," and elicited the following in return. The anxiety for a remittance is rather apparent.

Dear Friend:

I am in receipt of your brief communication and while I am pleased to hear from you, I regret to inform you that I do not quite understand your letter. I wrote you fully regarding your condition and sent you a trial treatment also requested you to make remittance, so that I could prepare and forward a complete course.

Now dear friend, I trust that you will comply with my request and make remittance at the earliest possible date. I have made a speciality of treating diseases of this nature for a number of years and have been very successful and have every reason to believe, therefore, that I can bring about a cure for you. Should it be impossible for you to make a remittance I wish you would write me to that effect perhaps I may be able to give you advice that may be of great benefit to you.

Hoping that you will make remittance at an early date, assuring you of my prompt and careful attention, I beg to remain,

Sincerely yours,
Dr. JAMES W. KIDD.

CONSUMPTION.

In the BRITISH MEDICAL JOURNAL of August 22nd last (page 506), in the course of an article on certain secret remedies for consumption, the results of an analysis of "Stevens' Consumption Cure" were given. It was stated that it was a clear red liquid, and that analysis showed it to contain, in 100 fluid parts, 21.3 fluid parts of alcohol, 1.8 parts of glycerine, and 4 parts of solid substance, which contained about 1 part of a tannin and 0.2 part of ash, the remainder being extractive. No alkaloid was present, and no other active substance could be detected. The solid substance agreed in all respects with the solids of decoction of krameria, or a mixture of this decoction with a little tincture of kino.

Mr. Stevens, in one of the circulars which he issues states that:

> "The African herbs which my Cure is prepared from, have never been used by any white Doctor or Chemist before I introduced same to civilization a few years ago. These herbs are original and have defied our cleverest Analysts to discover the active principals *(sic)* they contain."

In the same issue we also quoted (page 518) from a circular letter which Mr. Stevens had recently sent out to medical practitioners, asking them to treat consumptive cases which defied all the ordinary remedies, with his secret preparation. The circular continued:

> "The great drawback to my cure, so far as the medical profession is concerned, has always been the fact that I would not reveal its formula. This is now done away with; its formula is 80 grains of umckaloabo root and 13⅓ grains of chijitse to every ounce, prepared to *British Pharmacopoeia* methods."

The publication of the article drew from Mr. Stevens a letter addressed to the proprietors of the BRITISH MEDICAL JOURNAL, in which he asserted that the component parts of the remedy were truthfully and correctly stated in his circular. We had failed to discover any reference to the two drugs with these remarkable names in any available work on pharmacy, and ventured to express the opinion that the formula was a farce. At the instance of Dr. Rayner, Dr. Porter, Medical Officer of Health for Johannesburg, kindly enlisted the assistance of Dr. G. A. Turner, who made inquiries from natives of several races, and from experts in native matters, without being able to ascertain that the names were known. Information was also sought from Mr. Charles F. Juritz, D.Sc., Senior Analyst in the Government Analytical Laboratory, Capetown, who was good enough to communicate with the Secretary of the Native Affairs Department. That department instructed the chief magistrate of the Transkeian territories to cause inquiries to be made into the question whether the native tribes there resident had any knowledge of "umckaloabo" and "chijitse," or of their reputed medicinal properties. The result of the inquiry was entirely negative. Nothing was known of any such plants, nor was it even possible to identify their names. Smith's *South African Materia Medica* contains no record of any such names as "umckaloabo" and "chijitse."

THE annual meeting of the Certificated Dispensers' Association held at the Apothecaries' Hall, London, E.C., was well attended. The financial statement showed a substantial balance to the credit of the association. The honorary secretary reported that the membership had steadily increased, the number at the end of the year being 325, and congratulated the members on the acceptance by the Government, through the kind offices of Sir William Collins, M.D., M.P., of an amendment securing the inclusion in Clause iv of the Poisons and Pharmacy Bill of holders of the certificate of the Apothecaries' Society. A register kept by the secretary had been the means of providing many members with temporary and permanent appointments.

BEER, AND THE MATERIALS USED IN ITS PRODUCTION.

IT is a matter of common knowledge that beer, in its several varieties, is by no means the same thing to-day as it was a generation or less ago; the progress of chemical and biological knowledge on the one hand, and the keenness of competition on the other, have led to great alterations both in the materials used in its production and the methods by which it is produced. Exact or reliable knowledge about this, however, is far from being common; vehement assertions are made that all or almost all the changes are for the better, and also that beer is now a manufactured chemical product of deleterious nature, in which little or nothing of genuine material is used. Such statements are rendered unacceptable by the existence of self-interest on one side and prejudice on the other. A short account of some of the facts concerned may, therefore, be of service to the medical practitioner.

Chemistry of Brewing.

Beer is generally understood to be an alcoholic liquid brewed from malt and hops, the alcohol being produced in a fermentation process caused by yeast. In 1847 the use of sugar in addition to malt was permitted by law, and it was only so recently as 1880 that the employment of other substances was legalized. In its simplest form the production of beer is carried out as follows: Barley grain is steeped in water, then drained, and the moist grain kept for some days at a temperature of about 55° F., during which time germination commences; the grain is then kilned, or exposed to the heat from a slow fire, which stops growth, and the rootlets which had formed are removed; at this stage the grain constitutes barley malt. The malt is next ground, and is then mashed—that is to say, it is treated with hot water for some hours; the liquid is then run off, a variable quantity of hops added to it, and the whole boiled together for some time. The liquid is again run off and cooled, yeast is added to it, and the mixture is allowed to stand for some days; the yeast multiplies greatly, producing alcohol and carbonic acid, and using up the dissolved carbohydrate in doing so. When the fermenting action is at an end the liquor is separated from the yeast, and then constitutes beer.

The chemical changes involved in the process are many and complex; the principal are as follows: During the germination of barley two of the nitrogenous bodies known as enzymes—cytase and diastase—are produced; the former has the property of attacking and dissolving the delicate envelope of the starch granules, of which the grain contains a large proportion, and so rendering the contents of true starch accessible to the diastase; under the influence of the latter the starch assimilates water and becomes converted into soluble carbohydrates, principally dextrins and maltose (malt sugar). These soluble carbohydrates are required for the formation of the young barley plant; some of the proteid stored in the grain is also converted to soluble forms. When the germinating grain is kilned, its life is destroyed and these changes are arrested, but the cytase and diastase which have been formed remain in greater or less quantity, according as a lower or higher temperature is employed in the kilning. When the ground malt is mashed—that is, treated with water between 140° and 160° F.—these ferments resume their action on the starch, and at the end of the mashing the liquid (now termed the "wort") contains most of the carbohydrate of the grain in the form of dextrins and maltose, and a part of the proteid has also gone into solution; the residue left on running off the wort consists chiefly of the empty cell tissue of the grains. In the next stage, when the wort is boiled with hops, several changes occur; sterilization is effected, and part of the proteid is coagulated and precipitated; aromatic and bitter substances are dissolved out of the hops, which play an important part in giving the beer its flavour and also act as preservatives. During the several days' action of the yeast, most of the maltose is converted to alcohol and carbon dioxide, and the gradual increase of the alcohol and diminution of the sugars leads to cessation of the growth of the yeast, which separates either to the top or bottom. The beer can then be run off, and is ready for consumption; usually, however, it is stored in casks for a longer or a shorter time, a further small quantity of hops being often added; during the storage a slow secondary fermentation is caused by the small amount of yeast remaining in it, improving the flavour and aëration.

Each stage of this process is capable of various modifications, causing variations in the product; also, almost every stage, as it has come to be understood, has presented the possibility of attaining the desired end, or some passable imitation of the desired end, by some other means than that originally employed, such other means either entirely replacing the original or being used as auxiliaries to it. To mention the variations first, the temperature at which the malt is kilned greatly influences the beer. Malt dried at a low temperature produces pale beer; that dried at a higher temperature gives a darker beer; the malt may also be roasted, like coffee, before mashing, and the very dark product then obtained is known as stout or porter. The quantity of hops boiled with the wort may be varied considerably, giving a less or a more bitter beer. The fermentation with yeast may be stopped while a good deal of saccharine matter still remains in the liquid, or may be pushed as far as possible, more or less "body" in the product being the result of such variations. When fermentation is conducted at a low temperature more sugar and dextrin will remain and less alcohol be formed; lager beer is produced in this way. The principal varieties of beer are thus as follows:

Mild ale, in which a low proportion of hops is used, and fermentation is continued until a low amount of solids remains.

India pale ale, which contains more hops than "mild."

Bitter ale, which contains more hops and also more solids than "mild."

Stout or porter, in which part of the malt is roasted; it contains a high proportion of solids, part consisting of caramel.

Lager beer contains more dextrin than English beer, and usually less alcohol.

The percentage of alcohol in beer varies considerably, according to the variety, and is usually between 4 and 7 per cent. by volume; but neither in regard to this nor to any of the properties just mentioned are there definite or binding limits, and the characters of any variety of beer or stout may differ considerably among the products of different brewers.

Substitutes for Malt and Hops.

As regards the employment of other materials than those mentioned above, it is not possible to condemn such a proceeding without qualification, while it is no less impossible to express entire approval of it. A Parliamentary Commission which reported on the subject in 1889 decided, after hearing the evidence of experts and others representing various points of view, not to recommend legislative restrictions on the materials used in brewing; a minority report, however, signed by only one member of the Commission, was in favour of restricting the name beer to a liquid brewed from malt and hops only. The employment of other materials is in many cases the normal result of a more scientific understanding of the processes in question, and a laudable desire to avoid the waste which occurred with the older empirical methods. But the desire to cheapen the production of beer by utilizing scientific knowledge has often led further, and, under the pressure of keen competition among brewers, has resulted in the employment of materials which do not yield the same product in a more economical manner, but which yield only a product not easily distinguished by the consumer from that of which it is an imitation. It is, then, at best highly debatable whether the cheaper imitation is as good as the older beer which it has displaced.

In answer to questions put in Parliament recently, the Chancellor of the Exchequer stated that the Board of Inland Revenue had refused its sanction to the use of malt and other materials containing arsenic in excess of the limit proposed by the Royal Commission on the subject, and also to the use of "heading" powders and liquids or other articles containing saponin, whether derived from quillaia or not, of flavouring essences, saccharin, sucramine, and compounds containing saccharin. On the other hand, the following articles had come under the notice of the

Board as being used in the manufacture or preservation of beer, and had not been prohibited:

Rice, flaked rice, rice grits, rice malt, gelatinized rice.
Maize, flaked maize, maize grits, maize flour.
Oats—flaked, rolled, malted, and crushed.
Torrefied barley.
Yeast foods.—These include solid and liquid preparations of peptonized yeast sold under various trade names, as nutramide, peptomide, dalline, etc., and mixtures of malt, flour, and alkaline phosphates, common salt, etc., and preparations of malt combings, etc.
Preservatives.—Mainly sulphites of soda and potash, sold under various trade names, for example, kalium metasulphite (K.M.S.), sulphosite, etc. Salicylic and boracic acids are also occasionally used as preservatives.
"Burtonisers" (substances used for hardening brewing waters) are chiefly sulphates and chlorides of calcium and magnesium.
Neutralizers.—Mainly carbonates of potash and soda and sold under various trade names, as regenerator, acid neutralizer, antacid, etc.
Hop Substitutes.—Catechu or cutch, tannin, extrait de houblons d'Alsace, Davis's hop substitute, optanin, quassia, and preparations containing quassia.
Preparations used to precipitate albuminous matters from wort, mainly gelatine, Iceland moss, Irish moss, alginol, ibrite, etc.
Miscellaneous Brewing Materials. — Albumen, maltose, linseed, liquorice, amide syrup (ceramide), dextrin.

A few figures showing the extent to which some of these materials are used may be of interest. Brewers are required by law to keep full records of the principal substances employed in brewing, and the statistics so obtained are published annually. The figures here given are the most recent available; they refer to the year 1906–07, and are taken from Parliamentary Paper No. 32 of Session 1908.

Brewers who employ only malt and hops or hop substitutes constitute 44 per cent. of the total number of brewers licensed, but produce only 9 per cent. of the beer brewed in the country; of this quantity, over two-thirds—equal to 2,600,000 standard barrels—is the produce of a single firm; in 1900 the number of brewers in this class was 55 per cent. of the total of those licensed. The remaining 91 per cent. of the total beer produced is made by brewers who use malt substitutes as well as malt. Taking all the breweries in the country together, the total of malt and malt substitutes used is divided into:

Malt	76.55 per cent.
Unmalted corn	0.14 ,,
Rice, maize, and similar materials ...	6.46 ,,
Sugar and similar materials	16.82 ,,

In the hopping process the materials used are:

Hops	99.95 per cent.
Hop substitutes	0.05 ,,

The use of other materials than malt in the mash tun depends on two facts: first, the diastase of malt grain is capable of converting into soluble carbohydrate a larger amount of starch than is present with it in the grain; and second, yeast can act on other sugars than the maltose formed by the action of diastase on starch, and the two principal products of fermentation, alcohol and carbon dioxide, are the same, whatever the nature of the sugar employed.

The first of these facts permits of the use, in the mash-tun, of unmalted grain (which contains little or no diastase) of various kinds, the principal ones employed being barley, oats, rice, and maize; wheat, rye, sago, and potato starch are also used; when maize is used the germ is first removed, as it contains a good deal of oil which gives an unpleasant flavour to the beer and interferes with its brightness. The starch of any unmalted grain would not be acted on by the diastase of the malt unless the granules were previously burst, and unmalted grain must therefore be boiled before it goes to the mash-tun. This is often done in the brewery; but flaked rice, flaked maize, torrefied barley, and other materials consist of grain that has been moistened, heated sufficiently to gelatinize the starch, and again dried, before it is sold to the brewer. If the malt employed contains sufficient diastase, a very considerable proportion of rice or similar material can be employed; such "raw grain" may constitute 75 per cent. of the total taken for mashing. Most of the materials so used contain less nitrogenous substance than barley malt, and the wort is therefore poor in proteid constituents; one result is that when the fermentation stage is reached the yeast will not grow well unless the deficiency is made good, and the "yeast foods" mentioned in the list given above are added for this purpose. A large proportion of rice in the mash-tun gives the beer a watery taste, unless more body is given by the addition of sugar or some other form of saccharine material. It is usual, therefore, to adjust the quantities of malt substitutes employed so that the deficiencies of one shall be counterbalanced by the excesses of another. The amount of malt grain used in the mash-tun may be further reduced by the addition of malt extract, which is supplied to brewers in large quantity for the purpose; this contains the diastase necessary for converting the starchy material, as well as proteid and sugars for use at the later stage.

The next process, that of boiling with hops, does not lend itself to the use of substitutes on the same liberal scale as does the mashing. The tannin which is extracted from the hops by boiling assists in precipitating the coagulable proteid, and tannic acid or other materials containing tannin are used to a small extent. The bitterness which hops impart can of course be obtained in other ways, and quassia is the substitute principally in favour for this purpose; the result, however, is not a satisfactory imitation, as the bitter taste on drinking hopped beer is evanescent, while quassia leaves a more enduring bitterness in the mouth. The only "hop substitutes" which will give the characteristic hop flavour are preparations of the hop itself, which are sometimes used; while the antiseptic and preservative property of hops may be replaced by the use of substances added as preservatives, which, however, are introduced at a later stage.

After the boiling, the wort is cooled and yeast added; as already stated, yeast can decompose other sugars besides the maltose formed in the mash-tub, and the addition of one or more kinds of sugar is very usual. A further quantity is also commonly added after the chief fermentation is over; most of this remains in the beer, but a small quantity is decomposed in the secondary fermentation in the cask. The sugar most employed is invert sugar, usually produced by the action of sulphuric acid on cane sugar; glucose (starch-glucose or starch-sugar), produced by the action of sulphuric acid on starch, is also largely employed; cane sugar, dextrin maltose (made by acting on starch with acid, but not carrying the action so far as the production of glucose), and caramelized malt extract are also used. The sugar may or may not be added to the mash-tun, but it is almost always added before boiling with hops, so that other organisms shall be destroyed and the yeast allowed a free field.

The colour of beer depends primarily on the materials employed in the mash-tun. Various kinds of malt, known as amber malt, chocolate malt, crystal malt, black malt, etc., are prepared by kilning at higher temperatures or for longer times than those employed when diastase is required, or by subsequently roasting the malt; the use of a suitable proportion of one or other of these in the mash-tun gives the desired colour. But considerations of cheapness lead to roasted barley and maize being substituted, or to the still simpler method of adding sufficient caramel (burnt sugar) to give the required depth of colour.

The addition of some antiseptic to beer is very usual; a sulphite or bisulphite of one of the alkali metals or of lime is most frequently employed, while salicylic acid (about ½ oz. to the barrel of 36 gallons) is also used, and some other substances in small quantity. When too much acidity (principally lactic and acetic acids) has developed in the beer during the making or storing, it is neutralized by the addition of carbonate or bicarbonate of an alkali; these are commonly supplied to the brewer under proprietary names. Before bottling, clarification of beer is usually effected by the addition of an acid solution of isinglass or some other gelatine preparation or similar substance. This combines with a part of the tannin in solution, and the precipitate which is produced carries down with it yeast cells, traces of proteid, and other suspended matter.

The chief instance in which a deleterious substance has been found widely distributed in beer is that in which a few years ago arsenic, present in certain beer, produced a number of cases of arsenical poisoning manifested chiefly by neuritis; in this instance the arsenic had been intro-

duced in glucose, one of the malt substitutes employed. The thorough search for arsenic in all brewing materials resulted, however, in showing that malt itself was very commonly contaminated with arsenic from the coke fires employed in kilning, and could be the means of introducing quite appreciable quantities of arsenic into beer. The lesson to be drawn from this is, of course, that *all* the materials used in producing beer (and other articles of food and drink), whether "natural" or of the nature of substitutes, ought to be thoroughly examined by persons competent to judge them, before being used. The present freedom of the brewer to use practically any materials he pleases, subject to their being innocuous, by immensely increasing the field from which he can draw, certainly increases the risk of deleterious substances being introduced, as well as of the product being only a skilful imitation of what is really demanded; and although the restriction of brewers to the materials used in ancient times does not appear to be called for, and, as shown by the arsenical contamination of malt, would not of itself be an adequate guarantee of the quality of the product, it is certain that the prevailing practice of making beer from such a very wide variety of materials demands the utmost watchfulness on the part of the authorities.

LITERARY NOTES.

MESSRS. WILLIAM HODGE AND COMPANY, Edinburgh and Glasgow, are about to publish a new volume of their *Series of Notable Scottish Trials*. It deals with the William Douglas case, an eighteenth century trial which excited the greatest interest throughout the country. Readers of Boswell will remember that there are several references to the case in his *Life of Johnson*.

The same publishers have in the press a small book by the Rev. Father Power, S.J., of Edinburgh, entitled *The Alcohol Case: the Summing Up. A Medical, Legal, and Historical Sketch*. The author is a member of the London Society for the Study of Inebriety, and a well-known lecturer on intemperance.

We have received a descriptive catalogue of the medical and surgical works published by Messrs. W. B. Saunders Company. It is revised up to January, 1909. The specimen illustrations which accompany the titles of many of the books are admirably executed.

Among the many stories told of Rabelais some are undoubtedly apocryphal. The following is one of the authenticity of which we can give no proof, but which we could wish to be true. The Chancellor Duprat being for some reason annoyed with the Medical Faculty of the University of Montpellier, curtailed it of its privileges. The Faculty chose Rabelais to plead its cause. The difficulty was to get an audience with the irate Chancellor. Rabelais succeeded by stratagem where he would probably have failed by going about the business in a straightforward manner. Disguising himself in a green gown and a long grey beard, he walked slowly up and down before the Chancellor's house. His strange appearance naturally attracted attention, and among others who came to stare at him was the Chancellor's porter. Rabelais spoke to this functionary in Latin. On his answering in what little dog Latin he could produce to meet the situation, Rabelais replied in Greek. This brought a Greek scholar on the scene, to whom Rabelais spoke Hebrew. By this time the Chancellery was in commotion, and Duprat sent for the strange man who had exhausted the linguistic resources of his staff. He was so much amused by Rabelais's trick, and so interested by his conversation, that he forthwith granted him all he asked for.

The second number of the *Journal of the Incorporated Society for the Destruction of Vermin* contains an article on vermin by the editor, Mr. W. R. Boelter. He says that a study of the writings of ancient and mediaeval authors will yield thousands of recipes for the destruction of parasites. The searcher will also find how parasites themselves have in their turn been used in an endeavour to cure numerous ailments, a proceeding which, Mr. Boelter says, has in many cases been vindicated by the researches of modern chemistry. He goes on to point out that man in his fight against vermin has been singularly unsuccessful. One reason for this failure is man's inability to agree about what is and is not vermin. The equivalent of vermin in the ancient languages and in mediaeval books was applied to everything of a noxious or loathsome nature. In the Ebers papyrus twelve species of *vermes* are mentioned. In the Middle Ages Megenberg counted among *vermes* the bee, the spider, the toad, the silkworm, the gnat, the flea, the louse, the wasp, the caterpillar, and larvae of different species. This writer's zoology reminds us of that of the railway porter who, having to deal with a tortoise, delivered himself as follows: "Cats is dogs, and rabbits is dogs, but this 'ere's a hinsect, and must be paid for." Vermin in German is *ungeziefer*, that which is not fit to serve as an offering to the Deity. Hence vermin was thought to be associated with the devil, and played a large part in witchcraft. About the end of the seventeenth century two books on the destruction of vermin were published in Germany, one by a physician named Hohberg, the other by Abraham Friedrich Krafft. Mr. Boelter thinks that Krafft's book led to the formation of a society for the total extermination of all vermin. Willis, whose name is enshrined in the arterial circle at the base of the brain, discussed in a treatise entitled *De Anima Brutorum* the question whether vermin have souls, concluding affirmatively, and adding that, "although vermin are mostly of a cold nature and essence, their souls are, like those of the warmest and most perfect animal, heated and fiery, and consist of a sulphurous essence."

Writing in the *Boston Medical and Surgical Journal*, Dr. Charles G. Cumston says that for a long time he has searched in the writings of the ancient physicians with the hope of finding some description of appendicitis. Both Hippocrates and Galen are silent on the question. Celsus, however, appears to have been familiar with appendicitis, because, in speaking of colitis, he says:

> The disease of the large intestine is principally situated in the cecal portion. Considerable swelling and violent pain are observed, particularly on the right.

He advises the application of hot, dry fomentations. Of the writers during the period of the Decadence, Dr. Cumston has consulted Aetius, Oribasius, Paul of Ægina, and Alexander of Tralles. In the *Tetrabiblion* of Aetius (cap. xlii, lib. ix) the following remarks are to be found, which, in Dr. Cumston's opinion, undoubtedly refer to suppurating appendicitis:

> Occasionally abscess of the intestine occurs, whose rupture gives rise to purulent stools.

After stating that this condition is often erroneously diagnosed as dysentery, he goes on to say:

> In abscess of the intestine there is a localized pulsating pain. There are no colics such as are observed as forerunners of an attack of dysentery. When the abscess has matured the temperature goes up and is more marked in the evening. When the fluid has collected, the morbid phenomena diminish and the pain becomes less acute, only to recur when rupture of the abscess takes place. Sometimes there is obstinate constipation. Nothing like this is encountered in dysentery.

He advises the use of linseed-meal poultices to which is added some astringent, such as blackberry wine, etc. According to Dr. Cumston appendicitis was apparently unknown to Soranus of Ephesus, because Coelius Aurelianus, whose writings are merely an abbreviated translation of the works of the former, gives no description of the disease.

Dr. W. G. Aitchison Robertson, of Edinburgh, writes:

> That the teaching of such authorities as Valsalva, van Swieten, Morgagni, and others (who believed in the infectious nature of phthisis) had been carried into practice in certain countries, is evident from the following quotations from John Howard's work on *The State of the Prisons in England and Wales, with an Account of some Foreign Prisons and Hospitals*, third edition, 1784.
>
> Speaking of the Italian prisons, he says that at Cività Vecchia "here is a spacious hospital on shore for the slaves. None were in irons. All was clean. In the centre of the great room in this infirmary was an altar for public worship. A particular room was appropriated for such as had cutaneous disorders, and another for *consumptive* patients. In this country the physicians are persuaded that the *consumption* is a contagious disorder. Patients afflicted with it in hospitals have a separate ward. The same precautions are used to prevent infection as in the plague. When this disorder has been in private houses the furniture is destroyed, and the rooms are scraped and fumigated, before they are again inhabited" (page 116).
>
> He alludes to the same belief when describing the *Real Hospital General* in Madrid. "Here are likewise rooms (carefully separated) for insane, for dropsical, and for consumptive patients. The contagion of consumption is supposed to infect

not only the clothes, bedding, and furniture of rooms, but also the walls and ceiling. Danger has been apprehended even from the horses of consumptive patients; and for this reason it was thought necessary, in an instance that was mentioned to me, to kill the horse of an officer who had died of this distemper" (page 158).

The doctrine of the infectivity of phthisis is much older than any of the authors mentioned by Dr. Aitchison Robertson. It was held by Aristotle and later by Galen. In the fifteenth century it was taught by Ballonius or Baillon of Paris, in the sixteenth by Cesalpinus, and by Paolo Zacchia and Nicholas Chesneau in the seventeenth, to mention only a few of the old writers who have dealt with the matter. Most stringent regulation as to the disinfection of the rooms in which consumptives had died in the eighteenth century were enacted in Spain and in Italy, and were in force in both countries till the nineteenth century was well advanced. That phthisis is communicable is an old belief, which was only partly given up in accordance with what was supposed to be more scientific medical teaching.

Medical News.

MR. ALFRED E. WILMOT, M.R.C.S.E., L.R.C.P.Lond., Burnham House, Burnham, Bucks, has been made a Justice of the Peace for the county of Buckinghamshire.

THE Lord Mayor of London and the Lady Mayoress will hold a reception at the Mansion House of the delegates and members of the International Congress of Nurses on the afternoon of the opening day, July 20th.

SIR JOHN CRAGGS having placed at the disposal of the London School of Tropical Medicine a fund to encourage investigations into the various causes of tropical disease, grants from this fund have been awarded to R. Howard, M.D., of the Universities Mission to Central Africa, and to B. M. Wilson, M.B., Ch.B., of Fiji.

THE members of the Glasgow University Club, London, have presented to Dr. C. O. Hawthorne a study table and microscope in recognition of his services as honorary secretary of the club during the past seven years. The presentation was made by Dr. Cumming Grant on behalf of the subscribers, many of whom were present. The company was entertained by Dr. and Mrs. P. H. Abercrombie, who kindly placed their house at the disposal of the committee.

WE are asked to state that hospitals in the county of London or within nine miles of Charing Cross desiring to participate in the grants made by King Edward's Hospital Fund for London for the year 1909 must make application before March 24th to the Honorary Secretaries, 7, Walbrook, E.C. Applications will also be considered from convalescent homes and sanatoriums for consumption situated within the above boundaries or which, being situated outside, take a large proportion of patients from London.

A MEMORANDUM by the Medical Officer of the Local Government Board in England, on administrative measures against tuberculosis, has been issued, and can be obtained, price 2d., through any bookseller. It supplements from a medical standpoint the information contained in a circular letter issued by the Local Government Board to all sanitary authorities and boards of guardians sent out along with the Public Health (Tuberculosis), 1908, Regulations.

THE Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act held its sixth meeting on Wednesday, March 10th, at the Privy Council Office, Mr. Almeric FitzRoy presiding. The following witnesses attended and gave evidence: Sir George Fordham, Treasurer of the Central Midwives Board and representative of the County Councils Association; Dr. A. Robinson, Medical Officer of Health for the County Borough of Rotherham; and Mrs. Heywood Johnstone, President of the Rural Midwives' Association.

THE London County Council has issued an order renewing for a further period of twelve months from March 13th the regulation requiring the notification of cases of cerebro-spinal fever (epidemic cerebro-spinal meningitis). On the advice of a committee appointed by the president of the Royal College of Physicians the council has decided that for notification purposes the disease at present known as posterior basal meningitis shall be included in the term cerebro-spinal fever, but that the term is not to be interpreted as including cases of meningitis due to tuberculosis, middle-ear disease, or injury.

As already announced in the JOURNAL of December 26th, 1908, a convention which will include all branches of medical electricity will be held in London from July 5th to 9th, 1909. The President is Dr. Lewis Jones; the Vice-President, Mr. Deane Butcher, President of the Roentgen Society; and the Honorary Secretary and Treasurer, Dr. Reginald Morton. The inaugural meeting, the general meetings, the demonstrations, and the exhibition will be held at University College, Gower Street. The exhibition will include all classes of electrical and physical apparatus for medical treatment. It will be held contemporaneously with the convention. Delegates will be present from America and the Continent, and representatives of the various foreign Governments will be invited to take part in a discussion as to the best means of providing apparatus and training for the army and navy. The papers and debates will be in English. Papers in French and German will be accepted provided a summary in English is sent. All papers will be reported either *in extenso* or in abstract in the *Archives of the Roentgen Ray*. The discussion on Roentgen and radium therapeutics will be under the charge of Dr. J. H. Sequeira, and medical men desiring to read papers or to take part in the discussion are requested to communicate with him at the London Hospital. The time required for the delivery of each paper should not exceed fifteen minutes. All other communications relative to the congress should be addressed to Mr. Ernest Schofield, Organizing Secretary of the Convention, 11, Chandos Street, Cavendish Square, London, W.

IN a paper on preparations of lactic-acid bacilli, read recently before the Chemists' Assistants' Association, Mr. W. H. Martindale, Ph.D., brought forward some interesting facts in regard to the production of sour milk and the preparations obtainable for the purpose. It has been stated that there are about 150 lactic-acid-producing organisms. The three bacteria which it appears most desirable to employ together for the production of sour milk for consumption are *Bacterium caucasicum* (the Bulgarian bacillus), *B. güntheri* (also known as *Bacillus acidi paralactici*), and *B. hüppe* (also known as *Bacillus acidi lactici*). Six preparations now on the market for this purpose were examined, after cultivating for ten and for twenty-four hours. All were found to contain *B. caucasicum* and *B. hüppe*, but *B. güntheri* was found in only one; one of them showed other organisms, and a second had developed cocci after twenty-four hours. Experiments were made on incubating milk after the addition of lactic or acetic acid, without bacteria; as was to be expected, if the milk was efficiently sterilized before beginning the incubation, no additional acid was produced, but when sterilization was omitted substantial amounts of acid were formed; in the milk so treated *B. hüppe* was identified, but no *B. caucasicum*. A few experiments on the extent to which the casein was rendered soluble during the action of the lactic acid organisms pointed to such a change being effected to only a slight extent, but the matter was not conclusively dealt with; the proportion of the phosphate dissolved in the whey was found to be increased. Soured milk supplied by some dairy companies was examined in regard to the organisms present; *B. hüppe* was the prevalent form, *B. caucasicum* being present in smaller quantity, and *B. güntheri* also in half the samples examined.

CHELSEA CLINICAL SOCIETY.—The annual dinner of the Chelsea Clinical Society took place on March 4th at the Gaiety Restaurant, and was well attended. The chair was taken by Mr. A. F. Penny, the President of the society, who, in proposing the toast of the evening, described how the society had begun from a discussion held between Dr. Austin Cooper and himself twelve years ago. They then started the society at the old Chelsea Dispensary, with Dr. Foster Palmer as their first president. Societies like theirs, Mr. Penny added, contributed not only towards uniting the medical profession by the social influence of their meetings, but also aided the scientific advancement of medicine. Dr. T. Wright Parkinson, in replying, expressed the hope that medical men in Chelsea who were not members would attend their meetings and learn that it was not a mutual admiration society, but a society doing useful work. The Rev. Dr. Colisson, who also spoke, had a most enthusiastic reception, which was renewed on his singing, after repeated calls, "The Mountains of Morne." The toast of "The Visitors and Kindred Societies," proposed by Dr. Seymour Taylor, was acknowledged by Colonel T. H. Hendley, the President of the West London Medico-Chirurgical Society. Dr. J. Blumfeld, in a witty speech, then gave the toast of "The President and Officers of the Society." It was duly responded to by Mr. Penny, who expressed the obligations of those present to Dr. Collis Hallowes for his successful arrangements for the dinner.

British Medical Journal.

SATURDAY, MARCH 13TH, 1909.

THE MARCHING SOLDIER.

IT is astonishing that it should be necessary for a committee of the Advisory Board of the Army Medical Services to report in the year of grace 1908[1] "that it be "an instruction to officers commanding that the order "shall be given to men on the march in warm weather "to open the jacket and shirt"; "that inefficiency and "injury to health can be greatly lessened or abolished "by allowing free evaporation of sweat to take place "through the exposure of shirt and skin"; "that each "young soldier should perform at least one march a "week," and that "the load carried and the distance "traversed in these marches should be progressively "graduated."

The power to strike a decisive blow, the fate of a war, depend more than anything on mobility—on the marching power of the soldier—and this, as every schoolboy or girl knows who has been through a primer of physiology, depends on the training of heart and muscles, on the adequate supply of food and drink, on suitable clothing, and the proper provision of periods of rest. It is Gilbertian comedy to read the list of dignified names—Sir Alfred Keogh and Sir T. Gallwey, Sir Frederick Treves, and half a dozen colonels and lieutenant-colonels, with Drs. John Haldane and Pembrey as the *dei ex machina* behind this great reform—which allows Tommy Atkins to unbutton his coat when he is hot. The civilian is still to be left the advantage of being able to throw his off and carry it, rolled up, by a strap on a hot day's walk. The committee dare not go as far as that—yet. Let the poor sweating private be content with the buttons undone in front and his shirt open at the neck. Comic as it may be, there is tragedy behind —years of tragedy, of men commanded by officers who knew nothing of the elements of science or the simplest laws of health, officers who have handled the most perfect of machines, the living body of man, and have regarded it often from little other point of view than that of making it look smart and keep time like a wooden puppet dancing on a string. "All light "infantry and rifles march with a quick short step; it "is doubtful," says the committee, "if this be econo- "mical in a physiological sense" (or in boot leather), "and it is certain that it is opposed to efficient co-opera- "tion with men who have been trained to march at "the ordinary pace." How many have been made to suffer and how many have been killed in times of peace by marches and reviews on hot days with stiff tunics buttoned up and the heavy loads of full marching order! "Free exposure of the shirt saved the "body a loss of above a pint of water during a march "of seven miles in two hours." "The loss of moisture "produces a thirst which must be and is satisfied, and "unfortunately not always from the most suitable "source." "On a hot summer's day a march produced on "soldiers in drill order as great an effect as a similar "march in full marching order with 100 rounds of "ammunition on a cool winter's day." "By frequent "practice a man may develop his capacity to carry "loads, but he can only raise to a limited extent his "power of resisting the effects of a hot, moist, and "stagnant air." "On a hot day, 79° dry and 67° wet "bulb, five men during a march of seven miles in drill "order lost by evaporation an average of over 3 pints "of water."

The committee have found that the speed with which the pulse frequency falls to normal during a halt is the most valuable guide to the condition of the man. Training makes the return of the pulse to normal frequency very rapid. In the untrained and over-exhausted the pulse keeps frequent for a long time. We may note here that the recent work of Mr. Leonard Hill and Mr. Martin Flack has shown that the inhalation of oxygen brings down the pulse frequency, and sends up the blood pressure in the exhausted athlete; training consists in the development of cardiac power, so that the body obtains an ample supply of oxygen. The committee put forward some evidence that smoking lessens the efficiency, and recommend "that smoking in the ranks "should be strongly discouraged," and there is reason to believe that cigarette smoking keeps the condition of the heart and virility of the man below par. The few observations made on the drinking of water or beer on the march show no clear result; beer does not appear to be so great an offender as the cigarette; the latter escapes at present with comparatively little condemnation from the reformers. The committee, in their observations and recommendations, confirm the results obtained a decade ago in Germany by Zuntz and Schumburg, who in 1900 published a most valuable and suggestive monograph on the physiology of marching. They made very careful observations on young medical recruits, and determined the most suitable load, the distribution of the load so as not to interfere with the body movements, the length of march suitable for different conditions of the atmosphere, the effect of training, of a sore heel, etc., on the efficiency of the body as a marching machine, the adequacy of the rations, and so on. We may thank Heaven that the War Minister has a brother who is a distinguished and sound physiologist, and that he himself believes in the application of science to the affairs of daily life, and in the attainment of efficiency by science.

[1] Second Report on the Physiological Effects of Marching, by the Committee on the Physiological Effects of Training, Clothing, and of the Food of the Soldier.

MYTHOMANIA.

WE are all familiar with the liar of the type of the Rev. Charles Honeyman in *The Newcomes* to whom Fred Bayham said: "Excuse the frankness of an early "friend, but it is my belief that you would rather lie "than not." Sometimes the tendency is constitutional as in the family of a famous historian—himself somewhat remarkable for inaccuracy—of whose daughters it was said that one lied because she could not help it, another because she thought it was right, and a third because she thought it was wrong! As lying is an ugly word, we are thankful to the inventor of the euphemism "mythomania." In the subjects of this disease lying may be unconscious. Charity makes us willing to believe that it is often this form which afflicts the people who make such wonderful statements about vivisection, vaccination, cancer cures, and the therapeutic virtues of certain methods of treatment—for we are sorry to say the mythomaniac is by no means unknown in the medical profession. The disease has its source partly in want

of training in regard to accuracy of statement, for most children lie instinctively in self-defence, or out of vanity, just as those subject to authority lie to escape punishment or reprimand, and as artists lie *pour épater le bourgeois*. Partly it has its source in an overvivid imagination, partly in that "wish to believe" which is said to be the foundation of faith—the kind of faith that, in the too candid definition of the schoolboy, is the faculty whereby we are enabled to believe that which we know not to be true. This is probably the explanation of the strange disregard of truth which is often found in persons otherwise of the highest moral character. But it is not with the unconscious or half-conscious liar—or shall we say economist of the truth?—that we are here concerned, but with the conscious mythomaniac. This form of the disease the doctor has probably even larger opportunities of observing than the lawyer, although it was cynically said by Lord Justice Bowen—or some other judicial authority, for there are several claimants to the honour of the *obiter dictum*—that "truth will out, even in an affidavit." After all, for most people some sanctity hedges about an oath, and there is the possible penalty for perjury also to be considered. It would seem that, except in a few cases in which disgrace and perhaps something worse may attach to the confession of the cause of disease, a patient has no motive for lying to his doctor. That patients do lie, nevertheless, is within the knowledge of every one of us; but few perhaps realize the extent to which they lie.

The doctor who told Mr. Rudyard Kipling that "all patients were phenomenal liars where their "own symptoms were concerned" was evidently a man of wisdom ripened by long experience. Such a one, too, is Dr. Quintard, who not long ago gave the Société de Médecine d'Angers the benefit of what Iago calls his "own gained knowledge" of the subject. He makes all due allowance for shame, the dread of operation, and the loss of mental balance due to suffering. It is somewhat strange that he does not mention the *suppressio veri* practised by many who do not wish to have a secret fear confirmed; nor does he mention the lying which is one of the symptoms of hysteria or of the abuse of narcotics. Dr. Quintard, in fact, deals with the people who come to the doctor with the deliberate intent to deceive.

There is the gentleman who, with a breath reeking of alcohol, complains of cramps of the stomach, and swears that he drinks nothing but a mineral water even at meals. There is the lady who wishes to be sent to a fashionable health resort against the wish of her husband. There is the official who asks for a certificate that will get him a billet in the sweet South, which he covets on account of an asthma which has the awkward peculiarity of not manifesting itself by any outward and visible symptoms. There is the lady with a decayed molar who prefers that her suffering should be dignified by the name of neuralgia. There is the lady who wishes for a certificate that will give her a free passage to Lourdes to be cured of an appendicitis on the left side. There is the veteran with sciatica, which he attributes to a fragment of a projectile which has remained embedded in his gluteal region—not, surely, a noble part for a soldier to be wounded in—since he was hurt at Sedan, but who declines to allow the foreign body to be revealed by the *x* rays. There is the too common case of a widow who says she has already undergone an operation for fibroma, and pleads for another, but who is delivered from her tumour in due course by a practitioner of the obstetric art. There are many more—but these are examples of the more ordinary varieties of conscious mythomania, and they are so common that many doctors in large practice are tempted to say in their haste that all patients are liars. They lie to excite sympathy, from the wish to pose as remarkable cases, to escape work, to impose on charitable persons, or for the mere pleasure of deceiving the doctors. We mention these instances not as exhausting the art of the mythomaniac, but for the edification of the young practitioner who may not have learned that for ways that are dark and for tricks that are vain the Heathen Chinee is a model of truth and honesty compared with many patients. It should be needless to insist that reliance should never be placed on the statements of a patient about another doctor, or about the opinions attributed to him, but, as we have too much reason to know, half the quarrels of professional life are due to this cause. As far as possible a doctor should form his opinion on things which he can see, or facts which he can discover by physical examination. Pediculosis may be the source of irritation on the skin of a duke's son as well as on that of a cook's son, and the most icy chastity does not exclude the possibility of syphilis.

INTERNATIONAL MEDICAL ETHICS.

The subject of medical ethics has claimed a great deal of time and attention from the British Medical Association, and at the present moment the Central Ethical Committee has in preparation an index of ethical cases which may serve as the basis for a special ethical code. Many of the points raised are knotty ones, and there has been no little difficulty in arriving at a fair and equitable solution of some of the questions. It may, however, be stated that medical ethics are in a more advanced state in this country than in any other. We do not wish to imply by this that the German or French idea of what is ethical and what is unethical, because it may differ from ours, is either lax or unsound.

Ethics in medical conduct must necessarily depend on the members of the profession to whom the rules apply, and the views which they take as to the degree of protection upon which the individual members have a right to rely. The rules must also be influenced by the amount of protection which the law is willing to extend to regular medical practice; and it is probable that the chief reason why ethics in medicine are governed by stricter rules in this than in other countries is to be found in the fact that in no other country does the law of the land do less for the medical profession.

In medical ethics, however, there must be a certain number of fundamental points common to the conditions existing in all countries, and although these points have not yet been tabulated and formed into an ethical code, there is no doubt that such a code could be drawn up. About eighteen months ago, Professor Boas, of Berlin,[1] made a number of suggestions which he considered might serve as a basis for an international code. He has recently returned to the subject,[2] with special reference to an unfortunate difference between two medical practitioners in Pontresina and a doctor in Berlin. We do not propose to discuss this particular case, since according to our practice no judgement can be passed unless both

[1] *Berliner Aerztekorrespondenz*, 1907, No. 37.
[2] *Berl. klin. Woch.*, 1908, No. 52.

sides have been heard and examined in such a way as to remove all doubt as to facts. But we wish to call attention to Professor Boas's suggestion, which seems to us wise and practicable. It is that at the forthcoming International Medical Congress, which is to be held at Buda-Pesth, the question of international medical ethics should be discussed in one of the chief sessions. It might not be possible to come to any definite conclusions which could govern international medical ethics, but, after various views had been brought forward, it would be competent for the meeting to elect a committee representing all European countries to consider the subject, to draw up a scheme or code, and to submit the same to the leading medical societies or associations of the various countries, which could either accept the code, or suggest amendments, or refuse it. The Committee could continue to act until a code could be produced which would prove acceptable to all countries, and after such approval had been obtained the code would be held to regulate the professional relations of foreign medical practitioners with one another. Professor Boas has chosen an opportune moment, and if his suggestion is taken up and developed along the lines indicated, thanks will not only be due to him, but will be freely given.

THE COMING ANNUAL MEETING AT BELFAST.

PREPARATIONS for the meeting of the Association in Belfast in July next are being vigorously carried on there. Nine subcommittees are at work in various departments, and every effort is being made to prepare for a large number of visitors from across the channel. The Lord Mayor has signified his intention of inviting the members of the Association to an evening reception in the fine new City Hall on Wednesday, July 28th. Several garden parties are being arranged, and it is hoped that those members who care for sailing may have an opportunity of indulging in that pastime on the waters of Belfast Lough, while enjoying the hospitality of one of the yacht clubs. Golfing members will be specially well cared for, as a large proportion of the local members of the profession are golfers, and some of them very successful ones. A special competition, of which particulars will shortly be published, is to be held at Newcastle, co. Down, which boasts of the most sporting links in Ireland.

THE REGISTRATION OF NURSES.

THE dissatisfaction felt by leading members of the profession in Ireland at the supposed exclusion of that part of the United Kingdom from the scope of the bill for the registration of nurses found expression at the annual meeting of the Leinster Branch held in Dublin on February 13th. As a matter of fact, however, the bill in its latest form does apply to Ireland (see BRITISH MEDICAL JOURNAL, February 13th, p. 419). Nevertheless, in accordance with the request of the Honorary Secretary of the Branch, we give the full text of the resolutions carried on the occasion, which he has been good enough to send us since the date of the first report:—Dr. Craig proposed, Sir W. Smyly seconded, and it was unanimously resolved: "That we do not approve of any bill dealing with the "registration of nurses which does not contain clauses "providing: (*a*) That the bill apply to Ireland; and "(*b*) that the registration of a nurse confers no "authority to practise any department of medicine." Sir W. Smyly proposed, Dr. Furlong seconded, and it was unanimously resolved: "That we think in future "at least three years' hospital training should be "insisted on in order to qualify a nurse for registra-"tion." Dr. Craig proposed, Dr. Furlong seconded, and it was resolved unanimously: "That in each "country affected by the Act a register of hospitals "should be kept by a Branch Council, who should be "also empowered to examine and register nurses, "uniformity of curriculum and of examination in the "various countries being secured by the presence, "when advisable, of inspectors or visitors. The "register should be a general one, applicable to all "parts of the United Kingdom." It may be added that another matter dealt with in somewhat summary fashion in the first report supplied to us was the Referendum and Charter. We now give the terms of the resolution passed, as officially reported to us by the Honorary Secretary. He states that correspondence with the South-Western Branch was read, and the following resolution was, on the motion of Dr. Kidd, unanimously adopted: "That, in the opinion of "the Leinster Branch of the British Medical Associa-"tion, it is necessary for the safe government of the "Association that the Referendum be taken by a "letter to every member of the Association, and on "the requisition of half the Council." The Branch Secretary was instructed to forward a copy of the resolution to each of the Divisions in the Branch.

THE PRESS AND MEDICAL MATTERS.

A CORRESPONDENT of the *Times* takes it much amiss that we should have been made "the channel of "information to the public and the medical profes-"sion upon a subject of great importance to both." The subject referred to is the Radium Institute lately founded on the personal initiative of His Majesty the King, as to the objects of which we obtained an official statement which we thought it our duty to circulate to the press. The writer in the *Times* hides his amiable personality under the pseudonym "F.R.C.S.," but we may say of his identity, what Sir Thomas Browne said of the name Achilles assumed when he hid himself among the women, that it is not beyond all conjecture. We confess we do not see the inconvenience either to the public or to the medical profession of which he complains. On the contrary, we hold strongly that a medical journal is the proper channel of information on medical matters. The information was obtained by us in response to several questions on the subject of the Radium Institute which had been addressed to us. It may be remembered that we alone furnished accurate information as to the institution at a time when most of the London daily papers allowed themselves to be misled by an inaccurate announcement. We do not seek to penetrate the motives of those who supplied that information, nor do we think it necessary to say anything as to the facility with which the newspapers suffered themselves to be beguiled into announcing to the public, with a journalistic *fanfare* of the most brassy quality, a communication which might have been easily recognized as coming from some doubtful source of inspiration. However "inconvenient," therefore, it may possibly be to individuals, we think that it is a very distinct convenience to the general public to have information on medical matters conveyed through a channel whose character carries with it a guarantee of the genuineness of the information with which it is its province to deal. We go so far as to say that the medical press should be the sole channel for the conveyance of information on such matters. As we have often pointed out, the mischief done by the publication of incorrect reports of scientific discoveries and imaginary marvels of surgery is beyond all computation.

SPIRITUAL HEALING.

SPIRITUAL healing is still receiving a considerable amount of attention. A meeting of the Church and Medical Union was held at Church House, Dean's Yard, Westminster, on March 8th, when Dr. Lullum Wood Bathurst read a paper in which, according to a brief report published in the *Times*, he seems to have "dealt faithfully" with those among the clergy who dabble in the unqualified practice of medicine, either in their own persons or by supporting persons who, whatever may be their spiritual gifts, have no medical training. He quoted from the *Church Times* significant statements to the effect that the movement within the Church had grown silently but surely, and that the records of its achievements were not known to the world, but were known to those who had a right to know. We may be allowed to remark on this that those who have a right to know are the public, and that the promoters of the movement are neither philanthropic nor wise in hiding their light under a bushel. Dr. Bathurst pointed out that, so far from any desire being shown on the part of the Church to co-operate with the medical profession in this matter, there was ample evidence of individual clergymen in responsible and even exalted positions actively supporting unqualified persons who, from the medical point of view, could only be looked upon as quacks and charlatans. One effect of the silent action on the part of the Church, referred to by the *Church Times*, was that the medical man was met with the difficulty, or the impossibility, of knowing what the Church proposed to do, the treatment its members intended to carry out, and the methods to be adopted. Still more vague were the qualifications of the "carefully selected persons" so often spoken of, to whose treatment patients were to be subjected. In conclusion, Dr. Bathurst suggested an inquiry and authoritative information from the Church on certain points, to enable an understanding to be reached between it and the medical profession. But we do not think the profession will be disposed to meet the Church unless she bates her pretension to the gift of healing the body. There is no doubt that in certain cases the clergyman can help the doctor, but he cannot, without danger to the community, be allowed to take purely medical functions upon himself. As showing the widespread interest felt in the Emmanuel Movement, it may be added that Dr. Henry Rutgers Marshall, of New York, has dealt with psycho-therapeutics in the January number of the *Hibbert Journal*, and that "the healing power" forms the subject of an essay by M. A. Stobart in the *Fortnightly Review* for February, while Dr. A. T. Schofield discusses spiritual healing in the current number of the *Contemporary Review*. There is nothing, however, particularly new or illuminating in any of these articles. In an article published in the *North American Review* for February, Dr. Allan McLane Hamilton calls attention to a point which is generally forgotten or overlooked by the clergymen who are so anxious to co-operate with us in the healing of the sick. "In all this agitation," he says, "it "would almost seem as if the intelligent physician "had never made any use of psychotherapy, but that "he was a mechanical giver of drugs and took little or "no interest in his patients." He goes on to say, what has so often been said in this JOURNAL, that "if "the new critics of the medical profession, who have "been so active of late, would take the trouble to "investigate, they would find among the great and "successful men of all times and of to-day, that the "human side is very strongly developed and that their "patients are studied from every point of view and "treated accordingly." We would add that the intelligent application of the physician's knowledge of the influence of the body on the mind is a necessary condition of success in the difficult art of dealing with patients and reinforcing the curative power of Nature, or what comes to the same thing, enabling sufferers to work out their own deliverance from the thraldom of functional disease. All really great physicians have used this force, sometimes it may be unconsciously, but often with deliberate intent. It is the power of influencing the mind of the patient, or in other words, of exciting confidence in his "gift of healing" that makes what is called "personal magnetism."

FAILURE OF ANTIVACCINATION CAMPAIGN IN THE STATES.

THE petition for the abolition of compulsory vaccination in Massachusetts, backed by the State Antivaccination League, has failed to influence the Legislature, and "leave to withdraw" was reported by the Public Health Committee at a meeting of the Senate a few weeks ago. Last year Mr. Bonner, who was then the militant attaché of the Antivaccination League in this country, but whose services had to be discontinued for want of funds, entered on an American campaign. We have already recorded a glaring instance of misrepresentation by which his advent in Boston was heralded in the press. That misrepresentation was duly corrected in the Boston papers by correspondence from England. From a correspondent who has forwarded us press excerpts and particulars of the hearing before the committee, we gather that Senator Parker, as chairman, had a trying part to perform in an attempt to maintain order. The antivaccinators were allowed to consume much time, but instead of being grateful for this, they gave vent to their emotions, uttering groans or sneering laughter, at the statements by eminent physicians who came to oppose the petitions. Senator Parker attempted to treat them with courtesy, but it finally reached a point where the chairman had to threaten to dismiss the hearing. The correspondent adds: "Six of our most "eminent physicians spoke from personal experience, "and, as we say here, they put it all over the anti-"vaccinationists." Mr. Bonner is stated to have announced to the committee his intention of becoming a citizen of the States as soon as the laws could permit. The provaccinists on the other side of the Atlantic are fully alert in watching the vagaries of this doughty agitator, and are ready to cope with his "platform facts." There is much boasting of what Mr. Bonner has done in this country in spite of the candid confession, officially made here by the Antivaccination League, of the almost complete failure of "our objects." The wild statements and grotesque theories propounded before the Massachusetts Senate Committee were such that the hearing is stated to have developed into a laughable affair at times. If the members of the Senate were familiar with the state of affairs in the House of Commons, they would know that whenever the subject of vaccination is mentioned by the leading antivaccination member it is a signal for peals of derisive laughter, and the complaint of the rabid antivaccinators in this country is that no responsible persons or authorities treat their remarks seriously.

RADIO-THORIUM.

PROFESSOR SODDY has contributed to *Nature* an account of radio-thorium. This body he assumes to be the same as that described recently in a telegram to the *Daily Telegraph*, on the authority of Dr. Bailey of Chicago, under the name of radio-thor or thor-rad X, and characterized as a very marvellous and remarkably efficient substitute for radium. After eliminating American hyperbole, it would appear that Dr. Bailey

has found that the body called radio-thorium exists in pitchblende from Colorado. The claims of Dr. Bailey to have made a new discovery are on the same footing as those of a miner who claims to have discovered a gold field. The results may be of great value, but it is impossible on this account to claim any scientific advance. Even the idea of using the active products of thorium as a substitute for radium is due to Professors Rutherford and Soddy, who have recommended that the manufacturers of the Welsbach gas mantles should first separate from the tons of thorium they require its radio-active portions. The products that could thus be obtained would be those claimed as a new find by Dr. Bailey. Radio-thorium is an extremely interesting body according to current views. Thorium changes first to meso-thorium, then to radio-thorium, and then to thorium X and a series of other products. Thorium itself emits alpha rays, meso-thorium emits beta rays only, radio-thorium gives out alpha rays, and thorium X gives out alpha rays. Meso-thorium, radio-thorium, and thorium X lose a half of their radio-active powers in seven years, two years, and four days respectively. There is a further extremely interesting chemical property to be noted. When thorium is precipitated by ammonia the precipitate consists of thorium and radio-thorium, which bear so close a chemical relation that they cannot be separated, while from the solution thorium X and meso-thorium can be recovered. As has been already stated, meso-thorium emits only beta rays, but from it radio-thorium giving alpha rays, is evolved in a comparatively short time, and it is possible to collect the whole of the radio-activity of large masses of thorium in minute quantities of matter. It is conceivable that pitchblende may prove to be a more convenient source than the Welsbach mantles for the production of radio-thorium, and it is probable that radio-thorium, from whatever source it can be best commercially obtained, will prove of very considerable medical value. The fact that it can be cheaply procured may render it to a large extent a substitute for radium.

AGGLUTININS, OPSONINS, AND LYSINS.

IN a second report on the haem-agglutinins, haem-opsonins, and haemolysins in the blood obtained from infectious and non-infectious diseases in man, made by Dr. L. S. Dudgeon to the Royal Society at its meeting on March 4th, it was stated that the blood in 14 cases of typhoid fever showed haemolysis on nine occasions. Those instances in which haemolysi occurred when the immune serum was added to normal red cells terminated fatally. In the remaining cases this action was demonstrated when normal serum was added to the immune red cells. Auto-haemolysis was proved twice, once during an attack of paroxysmal haemoglobinuria, once in a case of tertiary syphilis. Iso-haemolysis was found several times when normal serum was added to immune red cells, less frequently with immune serum added to norma erythrocytes. Auto-agglutination was an extremely rare phenomenon. In one instance spontaneous and auto-agglutination occurred, and in this case auto-haemolysis was also proved. Further experience showed that iso-agglutination occurred in normal blood, but not auto-agglutination. Haemolytic agglutinins were present whenever haemolysins could be demonstrated. The specificity of haem-agglutinins had been proved, and the absolute specificity of bacterial and haem-agglutinins had been completely demonstrated. The agglutination resulting from the interaction of a serum and certain red cells could be completely prevented by previously saturating this serum with the specific red cells heated to 60° C. for one hour. Saturation of the serum with melanin failed to produce any effect. Haemo-phagocytosis was often well marked. The phenomenon usually resulted from the interaction of immune red cells, normal serum, and normal leucocytes. Haemolysins, agglutinins, and opsonins might be present together in a certain sample of serum, or the opsonins and agglutinins together, or opsonins singly. Usually, the agglutinins and opsonins had a distinct relationship.

TREATMENT OF SLEEPING SICKNESS.

THE report of M. A. Broden, Director of the Laboratory of the Belgian Colonial Society at Leopoldville, and of M. Rodhain, Director of the native hospital for trypanosomiasis there for 1907 and 1908,[1] deals chiefly with trypanosomiasis, as did its predecessors, though this part gives more details as to the treatment. Atoxyl, arsenic, the salts of antimony, atoxyl associated with strychnine, with mercury, with orpiment and with the salts of antimony, sublimate and methylene blue, have all been tried, but no more definite results have been obtained than by others, though they believe they have seen definite cure in 3 cases. The first was a lady who contracted the disease in 1903, the same case as has been reported on by Manson and others. She was treated with liquor arsenicalis (Fowler's solution); she remains in excellent health, and has had two children since then. The second case was that of Père D., treated solely with Fowler's solution; he had had no treatment since 1905, and in December, 1907, was in perfect health. The third case was Père R., who was treated first with Fowler's solution, then with atoxyl, and is now apparently quite well. All must allow that the first is an instance of cure, and as she and Père D. were treated with liquor arsenicalis alone, it might be well to go back again to this drug for routine treatment. In addition to the work on trypanosomiasis, the report contains notes on the treatment of syphilis and yaws, a paper on the *Porocephalus moniliformis*, and remarks on leprosy, on filariae and on intestinal and other parasites. The laboratory is evidently doing useful work.

PLEVNA REVISITED.

THE famous siege of Plevna is not yet forgotten, although the thirty-two years which have passed have dimmed its memory. An interesting account reaches us through the Melbourne *Argus* of a visit recently paid to Plevna by Colonel C. Ryan, M.B., P.M.O. of the Victoria Military Forces, who served with distinction as a surgeon in the Turkish army throughout the Russo-Turkish war, and was the only Englishman present at the siege of Plevna. On his journey from Belgrade, he was reminded when passing Alexinatz of a thrilling event. The Turkish position in the 1876 campaign was about a mile from the Servian army, and a certain Ahmed Bey, the strongest man in the Turkish army, overheard his commander-in-chief express a wish that a prisoner could be captured from the Servian lines. Ahmed Bey at once put spurs to his charger, and galloped straight off to the nearest Servian outpost. The Servian vedettes opened fire on him, but he kept to his course, marking down one sentry for his prey. The sentry fired, but missed him, and then, too late, started to run. Ahmed swooped down on him, grasped the man by the collar, and flung him easily across the saddle in front of him. Then he galloped back again, amid a rain of

[1] Rapport sur les travaux faits au Laboratoire de la Société Belge d'Études Coloniales à l'Hôpital des noirs et au Lazaret pour trypanosomies à Leopoldville (Congo, Belge). Bruxelles: Hayez Imprimeur des Académies Royales de Belgique. 1908.

pursuing bullets, and, untouched, delivered up his prisoner to his astonished commander-in-chief! Reaching Plevna, Colonel Ryan was struck by the change in the little town, which now looks prosperous, and where the inhabitants wear European clothes instead of the "frowsy national garb that the Bul-"garians used to wear under Turkish rule." On the famous battlefield the old trenches can still be seen, though their sides have partly fallen in, and it was surprising to notice how close the range of fire was in those days, for the Russian guns were never more than 1,200 or 1,300 yards from the Turkish position. The Krishin redoubts were captured by Skobeleff at the third battle of Plevna, and recaptured by the Turks the next day, amid scenes of frightful carnage; "these redoubts," he writes, "have been carefully kept "in a condition of thorough repair, and they are still "exactly as they were at the time of the battle. The "No. I redoubt is three-sided, the open end when I saw "it, a few minutes after the Turks had recaptured it, "was filled with Russian dead, Skobeleff's troops "having utilized the dead bodies of their com-"rades to make a parapet, from behind which they "fired at the charging Turks. This redoubt is now "enclosed in a small reserve, called the Skobeleff Park, "where the memory of the Russian hero is kept green. "A great mausoleum looks down upon the scene of "the greatest of all the great fights of Plevna." The memory of Skobeleff is still preserved with almost religious veneration, and a Bulgarian sentry stands on guard outside the little museum, with his bayonet fixed, protecting the relics of the hero, whose undaunted courage did so much to set Bulgaria free. Colonel Ryan succeeded in finding the house in which he had lodged during the siege, still inhabited by the same family, who gave him a warm welcome and recalled some wonderful adventures of the war. He asked them if they remembered how Skobeleff took the redoubt while the bullets were pattering on their red-tiled roof and the family were crying all night; and in his turn he was reminded how he had found two Russian heads in a gooseberry bush in the garden which had been washed down by the flooded stream after the second battle, and how he had run into the house of a friendly neighbour and had eaten his hot dinner while the owner was hiding in a hole in the ground in terror of Russian shells. It will be remembered that Plevna, with between 50,000 and 70,000 men under Osman Pasha, resisted three attacks made on the town by the Russians, who, finding it impossible to take it by assault, determined to reduce it by siege and blockade. For three months the garrison held out, but by the end of that time it had reached the limit of human endurance. The short rations were telling on the men, and typhus, which had broken out with fearful violence, was threatening to annihilate not only the civilians, but the troops also. Thousands of unburied corpses were lying in the streets, the hospitals were overcrowded, and in a deplorable condition. As no assistance came, Osman Pasha determined to try and cut a passage through the Russian lines. Every able-bodied person accompanied the troops, even the doctors and hospital attendants marching with them; whilst 4,000 unfortunates were abandoned for more than three days in the hospitals and ambulances of Plevna, where very many of them died. The march was begun at night in a storm of sleet, but ammunition ran short, and after heavy fighting the Turks were compelled to surrender. The fall of the Bulgarian town decided the war, though it cost the Russians some 50,000 killed and wounded, and delayed the campaign nearly five months.

MINISTERS AND INFANT PRESERVATION.

THE Prime Minister, when he received recently a deputation which presented resolutions passed by the National Conference on Infantile Mortality, was accompanied by the President and Parliamentary Secretary to the Local Government Board, and by the President and Permanent Secretary to the Board of Education. Mr. Asquith, in a sympathetic reply, congratulated the conference on the fact that it had succeeded in obtaining recognition, in the form of legislation or administration, of no fewer than eleven out of the fourteen points stated by it as being of first-rate importance. The three points remaining were: (1) The teaching of girls in domestic hygiene; (2) infant foods; and (3) the extension of the Midwives Act of 1902 to Scotland. Mr. Asquith said that all would agree that in the evils comprised under these three heads were included causes co-operating to bring about bad results; there was the actual waste of child life, and the evil of the growth into womanhood and manhood of children who had never had a chance of developing into normal citizens. He was in hearty sympathy with the deputation, and any practical form of legislation which could be suggested would receive most serious consideration from the Government. Mr. Runciman said that the girls left elementary schools too young, and there was a difficulty in getting a supply of proper teachers of domestic subjects; the Board of Education was endeavouring to persuade training colleges to insist on their students possessing training in those subjects. He hoped that the teaching in the secondary schools would improve in this respect; he hoped much also from the evening schools, and believed that some impression had there been made on girls between 14 and 16 years of age. Mr. John Burns said that since the conference had commenced its labours two years ago there had been a saving of more than fifteen thousand children's lives in one year. The Local Government Board now had a department to inquire into the quality of foods, and he had directed a special investigation into the quality and character of baby foods. As it was found that infant mortality was greatest in houses where there was the largest number of children in one room, he hoped that two or three years' operation of the new Housing Bill, which must become law this year, would make a considerable difference; he also hoped that the Milk Bill would pass.

THE "SEX PROBLEM" IN A NEW LIGHT.

OUR readers need not be alarmed. We have no intention of discussing the eternal question of sex either from the matrimonial or the extra-matrimonial point of view. We do not feel that we have any mission to enlighten the world as to the inner mysteries of the erotic subtleties in which the modern novelist delights, or to find answers to the "obstinate questionings" of those to whom the relations between the sexes seem to be the centre of this universal frame of things. We are concerned merely with a question of nomenclature. Some time ago we were taken to task by a correspondent whom in an unguarded moment we had called a "lady doctor" and, by implication, a "female medical practitioner." "*We* don't call *you*," wrote our indignant correspondent, "gentlemen" or "males." She went on to say that a Frenchwoman once said to her, "We have got rid of "*distinctions zoölogiques*." Have we? The French lady's—we beg pardon, woman's—remark reminds us of Johnson's old fellow student Edwards, who tried to be a philosopher, "but cheerfulness was always "breaking in." In the same way we fear zoology will keep breaking in till some higher development

gets rid of sex altogether. In the meantime the difficulty of nomenclature must remain. If we could find equivalents to *medicus* and *medica* the problem might be solved, though even in these simple terms there is a sort of flavour of zoology that might be considered affronting by women who object to being described as female. The word, of course, has fallen upon evil days. Goldsmith wrote,

> Where the poor houseless shivering female lies,

when he might just as well have written "woman.' But, then, he was the author of a *History of Animated Nature*, and had not lost the sense of zoological distinctions. That "female" was regarded as the very reverse of insulting in Shakespeare's day is shown by Touchstone, when he says to his rival William, "Therefore, you clown, abandon—which is in "the vulgar, leave—the society—which in the "boorish is company—of this female, which *in* "*the common is woman*." In the eighteenth century and in the first half of the nineteenth "female" was in constant use by persons who could not be suspected of any wish to insist on zoological distinctions. Fanny Burney, in 1786, described the Princess Royal as "the "second female of the kingdom." The word "lady" has now, perhaps, suffered degradation from too indiscriminate use. We read the other day in the report of the trial of a "lady prisoner"; she was a mill hand, and should, we suppose, have been described in terms of zoology. When a distinguished lady—again we entreat forgiveness, woman—was elected to the chief magistracy of a borough, the newspapers evidently were in some difficulty about her designation. "Female mayor" would, of course, have been quite too zoological; "mayoress" appears to imply a male—the adjective excites in us no feeling of repulsion—mayor; "woman mayor" was, therefore, the description mostly used. But about our *doctoresses*: "Women "doctors," which we see is used by a woman writer in an article kindly explaining why they fail, is too likely to be mistaken by the casual person for "woman's "doctor," a specialist who to our forefathers would have been a "man-midwife." Therefore, as "lady doctor" is proscribed, the sole term left us is "medical "woman," and we hereby renounce, abjure, and condemn with our whole heart and soul the use of any term in the slightest degree reminiscent or suggestive of zoology in describing those practitioners of the healing art who are not "gentlemen" or "males."

PROPORTIONAL REPRESENTATION.

IN the February number of *Representation* attention is called to the progress of proportional representation in South Africa. The draft constitution prepared by the South African National Convention includes the adoption of proportional representation with the single transferable vote for all elections. The steps needed before the change can be introduced include the consent of the legislative bodies of the present colonies and the passing of an Act through the Imperial Parliament. The Proportional Representation Society does not hesitate to believe that the South African legislatures will ratify and the Imperial Parliament sanction the proposal. In the same issue of *Representation* is printed a very able article by Mr. Fischer Williams, the counsel to whom the bill of the British Medical Association for the amendment and consolidation of the Medical Acts has been entrusted, on the general aspect of proportional representation, with special reference to party politics. There is a note also discussing the terms of reference to the Royal Commission recently appointed to examine the various schemes of election, with a view of advising the Government of this country in introducing a measure of electoral reform. Lastly, we may call attention to a pamphlet recently issued by the Proportional Representation Society dealing with the illustrative election held at Caxton Hall on December 3rd, of which a short account was given on December 12th, 1908. The matter is an extended reprint of the December number of *Representation*, but inasmuch as it places the whole method of the single transferable vote clearly before the public, we have no hesitation in recommending members who are interested in electoral reform to expend the sum of twopence on the pamphlet.[1]

THE ROYAL NAVY MEDICAL SERVICE.

IT is understood that the First Lord of the Admiralty, in presenting the Navy Estimates, will make a statement with regard to the Committee which he has appointed to report on the Royal Navy Medical Service. We trust that the recommendations of this Committee may conduce to the welfare of the service, which, with the display of a little consideration and the exercise of a little common sense, might be made exceedingly popular. The extraordinary official secrecy which has been observed with regard to the very existence of the Committee which, it is an open secret, has been sitting for some months under the Chairmanship of Vice-Admiral Sir John Durnford, K.C.B., is a little disquieting, and has given the impression that Mr. McKenna has, perhaps, no very clear policy, and has not fully appreciated his own position in relation to the medical profession and to that not voluble section of the public from whose children all branches of the navy are recruited. The Committee may do good, but, on the other hand, it may do harm. The service is not popular, and its unpopularity is due to the blunders of First Lords who have not been at the pains to understand its problems. There seems some ground to fear that the present First Lord, misled perhaps by the titles borne by the junior ranks of the service, runs a risk of falling into the fatal mistake of supposing that the duties of a naval medical service are mainly surgical, whereas they are mainly medical and sanitary. We pointed out last week in commenting on the Army Estimates that a medical corps had three classes of duties—therapeutic, military (or administrative), and sanitary. If Mr. McKenna has not grasped this elementary principle, he will only add another failure to an already too long list. The First Lord should understand that young medical men of the type the navy wants are neither to be dictated to nor bribed, and unless he has the statesmanship and courage to resist the importunities of theorists unacquainted with the special needs of the navy, and faddists who would arrest all scientific progress by the muzzle and the question he will not succeed. The matter is not primarily a medical question; whether the number of young medical men who enter the Royal Navy Medical Service in any year is twenty or forty is not a question which seriously affects the economics of a profession with between thirty and forty thousand members. But Mr. McKenna's action in this matter is being closely watched by thousands of anxious parents, rich and poor, and it is no exaggeration to say that his decision will influence tens of thousands of votes at the next general election.

[1] The pamphlet and the journal are obtainable from J. H. Humphreys, Honorary Secretary Proportional Representation Society, 107, Algernon Road, Lewisham, or through Messrs. W. H. Smith and Son's bookshops.

FAYRER MEMORIAL PRIZE.

The officers of the Indian Medical Service on the active list have subscribed a fund to found a prize in memory of the late Sir Joseph Fayrer, to be awarded at each half-yearly examination to the lieutenant on probation I.M.S. who obtains the highest number of marks in the subject of Pathology at the conclusion of the course at the Royal Army Medical College. The prize will consist of a medal with, in addition, a gift of books, should the proceeds of the fund permit. The memory of Sir Joseph Fayrer will always be honoured and cherished by those who knew him, and the prize will, it is hoped, assist in perpetuating his memory among the younger generation of officers who had not the privilege of knowing him personally.

The Prince and Princess of Wales paid a visit, on March 10th, to the Royal College of Surgeons of England. Their Royal Highnesses were accompanied by Sir Frederick Treves, and were received at the College by the President, Mr. Henry Morris; the Conservator, Professor Arthur Keith; and the Secretary, Mr. S. Forrest Cowell. Their Royal Highnesses were conducted over the Hunterian Museum, and afterwards proceeded to the Council Chamber, where a special collection of specimens was displayed. The visit lasted about two hours.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Army Medical Department.—In introducing the Army Estimates last week Mr Haldane said: Now I wish to say a word or two about the health and well-being of the troops. I do not go into the figures of the wastage, though a remarkable diminution is shown in the statement which has been circulated. There is no department of the army to which we owe more than to the Army Medical Service. It was started by Mr. Brodrick in 1902, and has gone on continuously ever since, growing on the lines which he laid down, and the effect of it is that the wastage not only in war but in peace has diminished in the most remarkable way under the direction of Sir Alfred Keogh, to whom the army owes a great deal in this regard as the Director-General of the medical service in the army. There has been a very great improvement progressively in the last six or seven years in the health of the troops. For instance, there has been a very great decrease in the number of those invalided out compared to what it used to be. Then there has been a great decline in what I may call preventive diseases, and in places like the Mediterranean, largely owing to the work of men like Colonel Bruce and other officers in the Army Medical Service, Mediterranean fever and other diseases like that have almost completely disappeared. We have got to another stage, and that is inoculation against enteric. My honourable friend the member for Sleaford will be happy to know that our inoculations are all voluntary; but the result of that system, as far as it has gone, has been a remarkable diminution in the number of patients suffering from enteric disease, and very much brighter conditions for those on duty. The most recent changes that have been made in the case of medical development are the Malarial Commission, which is doing very good work, and the organization of the work of the Antienteric Inoculation Committee, and a very valuable Committee of Experts of very high standing, who have been sitting to inquire into the physiological effects with regard to the food and training and clothing of the soldier. They have remodelled the system of training under conditions which not only render it better, but get rid of the awful disease which we used to have in the army called soldier's heart, which was no doubt due to the stretching of the heart due to the somewhat exaggerated mode of training. There are other things that have been done. The question of sanitary training of officers is most important, so that going on the field there should be officers who would know exactly what should be done in the way of providing conditions which would make disease unlikely. With that object examinations for sanitary purposes have been introduced for lieutenants on promotion. There are one or two minor matters which I may mention. A curious thing used to be the number of rejections of recruits because of the defective condition of teeth. We thought that that could be to some extent obviated. Some money was taken in the Estimate for seeing whether we could in the district treat recruits for their teeth so as to make them capable of passing the medical test. About 3,500 recruits who would have been rejected last year on account of defective teeth have had them put right at a cost of 6s. 8d. each, and have been able to recruit. We also succeeded in treating 3,500 other men actually serving at a cost of 5s. 9d. each to the taxpayer. I need not trouble the House with other details.

The Position of the Private Soldier.—A discussion on the social conditions of the private soldier's life was raised by Mr. Geoffrey Howard on going into Committee on the Army estimates. He advocated increased facilities for promoting temperance and more thorough training for employment in civil life after discharge from the army. In the course of his reply, Mr. Acland spoke of the improved facilities for education of young soldiers, and the improved sanitation of barracks, on which £16,000 would be spent this year. In referring to the sexual morality of the army, he said there had been a great change for the better during the last five or ten years. The result of the co-operation by chaplains, medical officers, and other agencies had been that whereas in 1897, of the six named groups of diseases which caused discharge from the army, the group of diseases due to this sort of excess came second (it was nearly the worst of all in 1897), in 1907 it had fallen to be practically the least of all. Putting it into figures, it amounted to this: That whereas in 1897 the discharges due to these diseases were 2.5 per 1,000 of strength, they had now fallen to 0.3 per 1,000. The admissions to hospitals were one-sixth of what they were ten years ago. Among other statistics showing evidence of improved health, there had been a decline of deaths from 1,336 to 1,091, and the number invalided had declined from 3,736 to 2,317. Towards the end of the evening Mr. Lupton made a protest against inoculation for typhoid fever, and concluded there was no justification for the practice. It was a degrading method, not a step in advance, but a retrograde step, taking us back 100 years. At this point the Prime Minister moved the closure, which was carried. The main question was then put, and the House went into Committee. On Tuesday night in Committee Mr. Lupton again raised the question of inoculation for typhoid, and referred to the proposal to inoculate for syphilis, which Mr. Haldane repudiated by an emphatic shake of his head. Mr. Lupton quoted some medical authority to the effect that soldiers inoculated for typhoid took twenty-nine days to recover, and the percentage of deaths was 6.5. With regard to Malta fever, he said the improvement was due to better sanitation. He also pleaded for vaccination to be voluntary, and ended by a denunciation of conscription. The vote for the men was then agreed to.

The Notification of Infectious Diseases.—Mr. Tyson Wilson asked the President of the Local Government Board if he could state under their separate headings the number of infectious diseases that it was compulsory to notify that were notified in England and Wales during 1908, with the number of deaths that occurred from each disease. Mr. Burns replied that the information obtained by the Local Government Board on this subject related to London and 256 boroughs and urban districts in England and Wales. Particulars with respect to the year 1908 were being collected, but the returns were not at present complete. The information obtained as regards the year 1907 was summarized at page xcii of the last annual report of the Board. In a later answer Mr. Burns said that he was informed by the Registrar-General that the only infectious diseases which were not ordinarily required to be notified for which he could state the number of deaths in England and Wales for any portion of 1908 were measles, whooping-cough, and diarrhoea. The figures for each quarter of

1907 and 1908, as published in the Registrar-General's quarterly returns, were as follows:

ENGLAND AND WALES.

	Measles.	Whooping-cough.	Diarrhœa.
1st quarter, 1907 ...	3,351	2,775	1,020
2nd ,, ,, ...	4,219	3.036	1,077
3rd ,, ,, ...	2,312	2,283	3,811
4th ,, ,, ...	2.527	1,942	4,396
1st quarter, 1908 ...	2,460	3,804	1,011
2nd ,, ,, ...	2,149	2,900	1,078
3rd ,, ,, ...	1,129	1,593	11,119
4th ,, ,, ...	2,172	1,257	4,689

Water Supply.—Sir George White asked the President of the Local Government Board last week whether his attention had been called to the condition of the water supply at Terrington St. Clement and other places in the district of Marshland, North-West Norfolk, where many families were dependent upon pit or pond water, with the consequent danger to health; and, if so, whether he was willing to grant a local inquiry into the circumstances. Mr. Burns said that his attention had been called to the condition of the water supply of this district, and he had been pressing on the rural district council the need of their dealing with the matter. The district council had within the last few days applied to him to direct a local inquiry on the subject, with a view apparently to the formulation of a scheme of water supply. The application was now under consideration, but he would point out that it was the duty of the district council themselves to take such measures as might be necessary to secure a proper supply of water for their district, and to determine in the first instance on the scheme to be adopted for this purpose. Mr. Leif Jones asked a further question as to legislation to obtain powers to take water rights, and Mr. Burns replied that if it were possible to get through this year a bill giving local authorities greater facility of access to water supplies he should be disposed to take that step.

Tuberculosis in Milch Cows.—Mr. Ellis Davies asked the President of the Local Government Board whether, in view of the report of the Royal Commission on Tuberculosis in Animals that the disease might exist in the living animal without detection save by the tuberculin test, the Board proposed to insist upon such test in the case of all milch cows; and, if so, whether the Government proposed to compensate the owners of animals which were proved to be tuberculous only by the application of the test, and were subsequently destroyed in the interest of public health. Mr. Burns said that he had in preparation a bill dealing with the better supply of milk and the regulation of dairies; but he could not undertake to say in anticipation of the introduction of that measure what proposals the Government might decide to make with regard to the matters referred to.

Carcasses Seized for Tuberculosis.—In answer to Mr. Courthope, who asked the number of carcasses seized, and how many were condemned for tuberculosis, Mr. Burns said that he was not at present in a position to give the information desired. The medical officers of health had been requested to include in their annual reports for 1908 information as to the action taken under Section 117 of the Public Health, 1875, or Section 41 of the Public Health (London) Act, 1891, as the case may be, and they had been also requested to state the number of carcasses and parts of carcasses condemned for tuberculosis. When this information was obtained he would be happy to grant a return on the subject.

Fibroid Phthisis in Quarry Workers.—On Tuesday, in answer to Mr. Ellis Davies, Mr. Gladstone said that the Committee on Industrial Diseases had reported that the incidence of fibroid phthisis in slate quarries had been established in some instances. In the case of the Cornish mines special rules were established after an exhaustive inquiry, which showed extensive mischief owing to the use of machine drills. In the case of the slate mines and quarries, there was no evidence that the disease prevailed to a serious extent, and much of the drilling, he understood, was done by hand, involving much less exposure to dust. The question, however, of extending the precautions adopted in the Cornish mines to all cases in which dust of an injurious character might be produced by rock drilling had not been lost sight of, and the working of the existing rules was being carefully watched. The Royal Commission on Mines was, he believed, shortly to reach that part of its inquiry which had to do with conditions of health and safety in metalliferous mines and quarries, and it would be desirable that the matter should be considered by them.

Infant Mortality.—In answer to Lord Castlereagh, who asked about the death-rate of infants born in workhouses and workhouse nurseries, and how it compared with the ordinary infant death-rate, Mr. Burns said that he had seen the figures on this subject in the Minority Report of the Royal Commission. He did not think that these figures could properly be compared with the ordinary figures of infant mortality, for, as the authors of the Minority Report themselves recognized, it was never satisfactory to compare the mortality rates of institutions having only limited numbers of inmates placed under exceptional circumstances and having peculiar antecedents with those of the population at large. The subject was of much importance, and it was being carefully examined.

The Inebriates Acts.—Mr. Cecil Harmsworth asked the Home Secretary whether, before introducing a bill to amend the Inebriates Acts, he would consider the desirability of collecting evidence, whether by means of a Select Committee or otherwise, as to the efficacy of some of the methods of drug treatment in the cure of inebriety. Mr. Gladstone replied that the recent Departmental Committee advised that "no good purpose could be served by making a further or more extended investigation into the value of existing methods for treatment of inebriety by the use of drugs." He concurred in that opinion, and was not prepared to delay legislation, which was urgently required.

The Report of the Vivisection Commission.—Mr. Gladstone informed Mr. Gooch last week that the preparation of the report was being proceeded with, but owing to the large amount of evidence that had been taken and the technical nature of much of it, considerable labour was involved, and it was difficult to indicate exactly when the report was likely to be presented.

Street Accidents (Medical Fees).—Mr. Weir asked the Home Secretary if he would state the fees payable to doctors and veterinary surgeons respectively for attending accidents in the streets and for giving evidence thereon in police courts. Mr. Gladstone replied that the following were the fees payable: (1) To medical men: For attending casualties, 3s. 6d., if between 7 a.m. and 7 p.m.; 7s. 6d. if between 7 p.m. and 7 a.m. For giving evidence, 10s. 6d. for each case, if within two miles from residence, and for each additional mile 2s. 6d., with a maximum total fee of 21s. (2) To veterinary surgeons: For attending injured horses, 10s. 6d.; for slaughtering, if necessary, 5s., or, if a Greener's humane killer was used, 10s. 6d. He understood that veterinary surgeons never had occasion to give evidence in accident cases.

The Public Health Officers Bill to amend the law relating to the tenure of office of medical officers of health and sanitary inspectors, and for other purposes, was introduced by Sir Walter Foster on Tuesday last. The second reading is put down for April 16th.

New Bills.—The following new bills have been introduced and ordered to be printed: The Nurses' Registration Bill, by Mr. Munro Ferguson; the Nurses' Registration Bill (No. 2), by Mr. Findlay; the Asylums Officers' Superannuation Bill, by Sir W. Collins; Death Certificates (Charges) Bill, by Mr. Gill; the Oaths Bill to facilitate the administration of oaths by uplifted hand, by Mr. Bramsdon; and the Public Health (Provisional Orders) Bill, by Mr. George Thorne.

England and Wales.

[From our Special Correspondents.]

LEEDS.

The Medical Inspection of School Children.

The arrangements which have been made for the medical inspection of school children by the Education Committee of the Leeds City Council have excited a good deal of interest among the members of the profession of Leeds, and call for some comment. It will be remembered that the Medico-Political Committee of the British Medical Association circulated among all the Divisions a report dealing with many points arising in connexion with the medical inspection of school children, including the various methods and rates of remuneration. It was pointed out that the inspection might be carried out by a whole-time medical officer with junior or assistant medical officers under him. In this case it was suggested that the salaries should be not less than £500 for the senior and £250 for each of the juniors, travelling and other expenses being met by the Committee. In the event of payment per head being adopted, it was suggested that 2s. 6d. a head should be the minimum fee. For part-time officers the Association recommended a system of payment already in operation in London—namely, that the salary should be based upon the time devoted to the work, and that the minimum should be £50 per annum in respect of each school session of two hours per week. The opinion of each Division was specifically asked for as to the rate of remuneration, and at a meeting of the Leeds Division held on January 29th, 1908, a resolution was passed approving of these rates. It is indeed matter of regret that the Divisional meetings of the British Medical Association are not well attended in Leeds. On this occasion the attendance was only 22, the total membership of the Division being 155. The report had, however, been circulated and the business announced on the agenda paper, and so the opinion expressed must, especially as the meeting was unanimous, be regarded as that of the Division. After much deliberation the Education Committee recommended to the City Council the appointment of a medical officer to devote the whole of his time to the inspection of school children in Leeds at a salary of £350. They also recommended the appointment of medical practitioners to assist in the work; these to be prepared to devote one, two, or three half-days in the week to medical inspection at a remuneration of one guinea for each half-day's service of thirty examinations. When these recommendations came before the City Council, they were modified in this respect—that the appointment of the whole-time medical officer was negatived, and it was arranged that the general administrative work should be placed in the hands of the present medical officer of health. The number of part-time medical officers to be appointed was discussed, and though no actual number was decided on, it was generally understood that a large number would be appointed. The matter next came before the Executive Committee of the Division in this way. When the advertisement—which was inserted in the local press—was sent to the British Medical Journal, the discrepancy was at once noticed between the scale of fees formerly approved of by the Division, and the much lower scale of fees in the advertisement. The Medical Secretary therefore communicated with the Secretary of the Division, and a meeting of the executive, followed at the earliest possible date by a meeting of the Division, was held to discuss the matter. This meeting was held on January 20th. There was an attendance of twenty-two members. Dr. T. Wardrop Griffith was in the chair, and explained the reasons for the meeting being summoned. He also stated what was common knowledge—that the Leeds Education Committee during their deliberations had been approached by Dr. Hawkyard and Dr. Woodcock, the chairman and secretary of a newly formed association of medical practitioners of Leeds and district. Both these gentlemen, who are members of the Division, were present and spoke at the meeting. The general feeling of the meeting was that the pay was quite inadequate. If on the one hand an afternoon's work was to be regarded as two hours' work, then the examination of thirty children other than in a perfunctory manner was not possible; if, on the other hand, the thirty children were examined in anything approaching a satisfactory manner the amount of time to be devoted to them would render the remuneration of one guinea absurdly small. It was confidently asserted by one speaker that notwithstanding the statement in the advertisement that the number of cases to be examined was thirty, if it was found—as Dr. Wardrop Griffith was certain it would be found—that this could not be done in two hours, the payment of one guinea for the afternoon's work would still be forthcoming, but he pointed out that this was certainly not what was said. It was understood that a large number of applications had been sent in, many of them by members of the Division. It was felt that it would not be right at the eleventh hour to call on members either to withhold applications or to withdraw them. There was no doubt that an adequate number of applications would have been received even if every member of the Division had loyally fallen in with such a suggestion. All that was done, therefore, was that the chairman, Dr. Griffith, along with Dr. Eddison, Dr. Hawkyard, and Dr. Allan, the Secretary of the Division, were appointed to seek an interview with the Education Committee as soon as possible and lay the views of the Association before them. This was done, and the deputation, which consisted of Dr. Griffith, Dr. Hawkyard, and Dr. Allan, went before the Committee on January 27th. When Dr. Griffith, who acted as spokesman, pointed out the impossibility of medical men examining thirty cases in two hours or two and a half hours, he was immediately met by the statement of one of the members, which was ratified by the chairman, that it did not matter within reasonable limits how long was taken over the examination; the essential thing was that one guinea was the fee for thirty examinations, and that if desired the medical men might spread these examinations over two visits. Dr. Griffith's obvious rejoinder to this was that in this case the amount of time necessarily and very properly devoted to the examination of thirty children was going to be very inadequately represented by the payment. The chairman then told the members of the deputation that the committee had not decided on the scale of remuneration without consultation with representatives of the medical profession—which, of course, they knew—and that no less than eighty-nine applications had been received. Dr. Griffith said he knew that this was the case, that the remuneration was, all the same, far too small, but that, fully acquainted as he was with the character and calibre of most of the men who were applying, he did not doubt the work would be conscientiously done. Though the two representatives of the new association doubtless did their best to obtain fair terms for the profession, yet one cannot help feeling that had the members of the Leeds Division of the British Medical Association attended the meetings in good numbers and regularly, an important question of this kind would not have been decided in the way it has, but in harmony with the legitimate and reasonable wishes of a united profession. The scheme as above described has not passed without criticism from other quarters, and it has had to be modified as the result of an interview with Dr. Newman, Chief Medical Officer of the Board of Education. The general supervision of school inspection will remain, as was suggested, in the hands of the medical officer of health; under him will be a part-time general medical practitioner, who will act as supervisor of the other medical inspectors; and, finally, the number of medical inspectors to be appointed is not to exceed twenty. The matter must for some time be in the experimental stage. It is confidently anticipated that the committee will become alive to the error of its ways, and raise the rate of remuneration. Indeed, it is by this expectation that many men have been influenced in their decision to send in applications.

MANCHESTER AND DISTRICT.

The Cost of Medical Treatment of School Children.

It is very evident that the education authorities in Manchester and the surrounding districts have a serious task to face if they really intend to prevent the whole cost of the medical treatment of school children falling on the

rates. They seem very properly to have made up their minds that those parents who can afford to pay for any treatment advised by the school inspectors shall be compelled to provide it at their own expense. Assurances have been given by the authorities of Manchester and Salford and other districts that only certain classes of cases shall be dealt with for the present, and that treatment shall be provided free only when the parents cannot otherwise obtain it. On the other hand, it is clear that many parents will take the ground that they, as the natural guardians of their children, have the sole right to decide when their children shall undergo treatment, and that if the authorities advise treatment of any sort the authorities must pay for it. If this contention were granted it would certainly result in many parents deliberately shutting their eyes to the necessity for treatment, and relying on the medical inspectors not only advising but furnishing any treatment needed, and unless the authorities are quite firm and resolute now at the beginning of the movement, there is danger that the whole of the treatment will fall on the rates. Another argument that is being used by people who are quite well able to pay is that in many cases treatment is advised not so much in the interests of the individual children as in the interests of the community, and in such cases the community should pay the cost. The free treatment of all cases of infectious fevers in the municipal fever hospitals has lent some force to this argument, as it is almost unheard of for the municipal authorities to ask even well-to-do people to pay for such treatment, except, of course, where private wards have been used. That the authorities are fully alive to the danger of a serious imposition on the rates by those who have no right either legally or morally to free treatment is shown by two cases which appeared in the law courts last week. At Eccles a man, described as a commission agent and presumably in a position to pay for treatment, was charged at the instance of the Eccles Education Authority with having unlawfully and wilfully neglected his daughter, aged 10, in such a manner as to be likely to injure her health. The Town Clerk stated that the charge was made under Section I of the Prevention of Cruelty to Children Act, 1904, which provided that any person over 16 years of age having charge of a young person under 16 years of age, who wilfully neglected a child in such a manner as to cause injury to its health, including the sight, was guilty of a misdemeanour; the Town Clerk added that this also implied the absence of reasonable care.

The Town Clerk and the Medical Officer of Health, who is also school medical inspector for the borough, showed that the defendant had received several notifications to provide his daughter with spectacles. The medical inspector said that he had examined the girl four times since last September, and that she was suffering from myopia of such a degree that it was quite necessary for her to have spectacles. The school teacher at the school where the girl attended said that she was suffering, both physically and mentally, from defective eyesight; that she could not see to read without placing the book close to her eyes, which caused great eye-strain; and could not distinguish figures on the black board. As this was the first case brought before it under the Act, the bench inflicted a mitigated penalty of 20s. and costs. Another case, which is not exactly one of medical treatment, but will fall under the care of the school medical inspector, came before the Manchester County Bench. The Levenshulme Education Committee summoned a man for the cost of a number of meals supplied to his two children. Altogether the children had had thirty meals each, at a total cost of 10s. The defendant pleaded that he had not been able to provide meals, as he had not had a full week's wages for many months. The education officer, however, proved that in the last two months he had received £9 12s. 6d. in wages. The magistrates ordered him to pay 2s. 6d. a week till the amount was paid, together with the cost of the summons. While those cases may serve as warnings to other parents, it is to be hoped that the authorities will not allow their present good intentions to be gradually weakened and worn away by repeated attempts to obtain free treatment on the part of those who can well afford to pay private practitioners.

RETURN CASES OF SCARLATINA.

It was stated last week in the Salford Town Council that complaints had been received from Pendlebury that cases of scarlatina had been dismissed from the Salford Sanatorium before they were free from infection, and that as a result fresh cases had occurred. The chairman of the Health Committee promised to make careful inquiry into any specific case that could be brought forward. A short time ago, too, the Salford Corporation was threatened with an action for damages on the ground that a patient with scarlatina had been dismissed too soon from the sanatorium, with the result that other children had caught the infection. The greatest sympathy must be felt with the health authorities, and especially with the medical superintendent of the sanatorium, when any of these cases arise, as it is known that they cause the greatest anxiety, and that every possible precaution is taken to prevent them. Medical men of course know the difficulties; they know that it is impossible to say at any time that a particular patient is free from infection as the nature of the infection is quite unknown, and the demand of the public for an absolute statement cannot be complied with. The Salford authorities act on the presumption that desquamation has nothing to do with infection, and cases are sent out while still freely desquamating. The public, on the other hand, have a firm conviction, which not so long ago was encouraged by authorities, that the peeling is infectious, and on this account nothing is so common for doctors in Salford to hear as the statement that there has been carelessness in dismissing patients when really the greatest possible care has been exercised. As a matter of fact, it is stated by the authorities that since they have begun to neglect desquamation as a factor in infection and to pay special attention to nasal and other discharges there have been fewer return cases than formerly, when the cessation of desquamation was regarded as the test of freedom from infection. The total number of return cases in Salford is not stated, but in Manchester, in 1907, there were 86 cases notified as having possibly arisen from eighty patients discharged from Monsall Hospital. It should be stated that in reckoning these, no "time limit" was taken; all cases being included, however long the interval between the discharge of the first and the onset of the second case. If a month is taken as the time limit, as is done in some towns, the cases which were possibly infectious when discharged form 4.5 per cent. of the total number discharged. In 1906, when patients were only detained in hospital four weeks, the number of returns was much higher, and accordingly, in 1907, the medical superintendent thought it advisable to regard cases apparently free from infection at the end of four weeks with some suspicion, and to detain them a few days longer. On this account, probably, the return cases are much fewer. At Baguley Sanatorium the patients causing return cases are 2.36 per cent. of the total number discharged. There can be no doubt that secondary cases would have been far more numerous if all primary cases had been treated at home, that is to say, the existence of return cases cannot be taken as any argument against hospital treatment.

Far more serious is the question whether return cases are not more fatal; in other words, whether the fever hospital does not tend to maintain a more severe type of the disease. On analysis of the deaths in Manchester the Medical Officer of Health finds that return cases do actually show a higher case fatality, but the fact that they generally occur at a younger age than the average cases may partially account for this, as the disease is more fatal the earlier in life it occurs. After all there does appear to be a special infectivity derived from aggregation in hospitals, and Dr. K. Gordon agrees with Dr. Niven's suggestion that there is in each patient an intrinsic infection derived from the original ailment, and an extrinsic infection obtained from other patients, the nose and nasopharynx acting as a sort of incubating chamber for germs derived from other patients. This is supported by the fact that, by separating convalescent from acute cases the return cases have diminished. Dr. Gordon now goes even further, and, though it is quite impossible to have separate wards for severe and mild cases, tries to do everything possible to isolate bad types of the disease. Screens are placed round their beds hung round with sheets damped with izal, and the nurses attending the bad cases have to use special gloves which are kept in bowls of izal at each

patient's bedside. In view of this special hospital infection it is not desirable to urge removal to hospital of cases that can be properly isolated at home, but Dr. Niven does not think it reasonable to contemplate dispensing altogether with removal to hospital, though it has frequently been suggested of late years. It may be noted that at the present time there is a very extensive epidemic of scarlatina at Stockport, and the hospital has been so crowded with cases that several have had to be refused admission, and it has not been possible to provide proper accommodation for the isolation of cases of diphtheria and enteric fever.

LIVERPOOL.

THE HESWALL POOR LAW SANATORIUM.

AT a recent meeting of the Liverpool Select Vestry it was decided to confirm a recommendation of the Finance Committee declining to sanction an extension of the Heswall Joint Hospital. The proposal was to add to the institution a bungalow, to cost £1,000, for the provision of twenty-five beds. The Vestry's share would be £400. For the extension, it was argued that it would materially reduce the average cost per bed of the entire establishment. The majority of the board, however, inclined to the opinion that the results of the treatment in the way of "cures" were not such as to justify any further expenditure. It was stated that this opinion was based on the view that the benefits conferred were not in any sense commensurate with the expenditure involved, which now worked out, it was stated, at £500 per bed. It was pretty generally admitted that the great drawback was that most of the patients who were sent to the Heswall Hospital did not come within the control of the vestry at a time when the disease could be successfully dealt with, but only sought assistance when they were in a state which was practically hopeless. It was stated that at the present time the Health Authorities of the city had under consideration the question of treating consumptive cases in one general scheme for the whole city, which would, of course, be more economical.

BIRMINGHAM.

BOVINE TUBERCULOSIS AND THE BANG SYSTEM.

THE Health Department of the city of Birmingham has issued a report by Mr. Dexter, Deputy Chairman of the Health Committee; Dr. Robertson, Medical Officer of Health; and Mr. Malcolm, Veterinary Superintendent, on the prevention of tuberculosis amongst cattle in Denmark. These gentlemen visited Denmark with the special object of studying Professor Bang's method of eradicating the disease. The system employed aims at the gradual eradication of infection by segregation and isolation rather than by slaughter. The only animals destroyed are cows with tuberculosis of the udder and "wasters" which exhibit well-marked and extensive generalized tuberculosis, and are, therefore, manifestly dangerous to others. The essentials of the method are: (1) The application of the tuberculin test to entire herds; (2) the complete and permanent separation of all reacting from non-tuberculous animals; and (3) the gradual rearing up of a healthy stock from the reacting animals. This last object is attained by the separation, immediately after birth, of all calves born of tuberculous cows, and the feeding of such calves, either with normal milk or with milk heated to a temperature sufficient to kill any tubercle bacilli it may contain. The writers were very favourably impressed with what they saw, and report as follows:

1. Bang's method has proved itself in Denmark during the past sixteen or seventeen years to be a practicable and economical method of ridding herds of dairy cattle of tuberculosis.

2. We consider it to be a method which may equally well be introduced into this country with a probability of even better results ensuing than have been met with in Denmark.

3. The method is somewhat slow in operation but has the advantage of not being costly, and of causing little or no disturbance to the trade of the milk producer. (A warning is necessary against the indiscriminate slaughter of cows reacting to tuberculin on account of the cost which such slaughter occasions.)

4. The difficulties met with in practice are neither numerous nor serious, and, apart from those relating to accommodation and the labour involved, they are likely mainly to arise from the want of appreciation of the fact that tuberculosis is an infectious disease, spread like other infectious diseases in a number of ways.

Amongst the examples of successful treatment by the Bang system the writers quote the experience of Sir O. S. Oxholm in South Zeeland. He commenced the Bang treatment in 1895, and then found that, out of his total stock of 448 cattle, 350, or 78.1 per cent., reacted. In 1908, thanks to the continuous application of the Bang system, he possessed 784 presumably healthy cattle; all these were tested, and only 19, or 2.4 per cent., gave a reaction. The Birmingham deputation asked Sir O. S. Oxholm what it had cost him to eliminate tuberculosis from his herds, and were informed that, instead of there being any loss, he had derived considerable profit. The milk producer with a clean herd reaps a substantial advantage, inasmuch as he is allowed to sell his milk as "baby milk," which, by Government order, must be the product of cows certified free from tuberculosis; and the retail price of such milk is approximately twice that of ordinary milk. The authors conclude their report with the following recommendation: "Pending the introduction of a Government bill, very good results could, we think, be obtained by Birmingham, and at very little cost to the corporation, if dairy farmers supplying milk to the city were offered the necessary tuberculin and veterinary advice on the lines set out in the report of the medical officer to the Health Committee on May 11th, 1908." In the report referred to it is proposed:

That in the first instance dairy farmers supplying Birmingham with milk should have their herds tested at the expense of the municipality, and should have the benefit of the advice of the corporation veterinary staff, provided they discarded wasters, separated the infected from the non-infected, and carried out certain other simple precautions which would in due course eliminate tuberculosis from their herds at very moderate cost to the municipality, and probably at an equally small cost to the dairy farmers.

LEICESTER.

HOSPITAL SATURDAY FUND.

THE report of the Hospital Saturday Fund for the city and county of Leicester for the year 1908 contains some rather striking figures. The fund has only been some eight years in existence but in that short time has made remarkable progress. Eight years ago the total subscribed by workpeople was little over £3,000, while last year this amount was more than quadrupled in spite of the fact that during that period Leicester was in the throes of serious trade depression. A sum of £12,000—approximately that collected—far overtops, in proportion to population, the collection of any other Hospital Saturday Fund. Furthermore, the expenses of collection and administration, which appear to be well under 4 per cent., compare most favourably with those of the majority of similar funds in other cities. Of the total available sum some 70 per cent. is annually allotted to Leicester Infirmary, and the rest spent on the maintenance of patients in the Fund's own and other convalescent homes. In view of this fact, the success of the Hospital Saturday Fund at Leicester may be regarded as in no small measure a testimonial to the infirmary, and as a sure proof of the esteem in which that institution is held by the population. It has been estimated, indeed, that in one way and another the infirmary receives an amount equal to one-half its annual expenditure from the working classes. If other Hospital Saturday committees could show equally good results there would be little fear for the continued prosperity of voluntary hospitals, and no room for even academic discussions as to the possibility of replacing them by rate-supported institutions.

WALES.

GLAMORGAN SANITARY COMMITTEE.

Midwives.—At the quarterly meeting of the Sanitary Committee of the Glamorgan County Council, Dr. Williams, county medical officer, reported that there were on the last published roll of the Central Midwives Board the names of 648 women residing in the administrative county. From replies received by him it appeared that 554 had signified their intention to practise, and there were 60 uncertified midwives practising in the county who could continue to do so until April, 1910. Of the 554 certificated practitioners, 457 had received their certificates on account of

having been in bona fide practice since July, 1901. The remaining 67 held certificates of training. The report stated that Nurse M. Evans, the inspector under the Midwives Act, had during the quarter visited 231 midwives, of whom 6 had attended the lectures at the University College, Cardiff, but had not presented themselves at the examination of the Central Midwives Board. On the motion of Dr. T. H. Morris, it was decided to recommend that a communication be sent to the Local Government Board calling attention to the number of women receiving theoretical training in midwifery, and expressing the opinion that only a small percentage of those receiving that education would be able to pass the examination, and that, inasmuch as many of those unable to pass were practising, and would probably continue doing so after 1910, it would be difficult for the inspectors of midwives to find out those who were legally practising unless the Local Government Board could see its way to ask the Government to put a column in the Register of Births, so that the person registering could give the name of the midwife in attendance, and thus enable her to be visited by the inspector. A report was also presented upon the training of midwives, in which it was suggested that the number of 45 free studentships in theoretical and 9 scholarships in practical instruction should be reduced, and scholarships awarded for complete courses of training, which would result in at least 25 fully-trained midwives being turned out annually without further cost, instead of 9 as at present. The report was referred to the Education Committee.

Health of the County.—Dr. Williams's quarterly report upon the health of the county showed that 295 cases of diphtheria had been notified, as against 209 in the previous quarter; 910 cases of scarlet fever, as against 610; and 112 cases of enteric fever, as against 110. Dealing in detail with the districts of the county, the report stated that the public slaughterhouse at Barry was much appreciated, but nothing further had been done in the matter of providing a public slaughterhouse for Briton Ferry, where it was urgently needed. The committee decided to inform the Briton Ferry Urban District Council that unless something was done by the next meeting of the committee the facts would be reported to the Local Government Board. It was also decided to send a similar communication to the Penarth Urban District Council. It was decided that no grant be made to the Barry Council in respect of its infectious diseases hospital until certain repairs, extensions, and additions had been carried out. It was reported that the negotiations between the Briton Ferry Urban Council and the Neath Rural Council for the provision of a joint hospital had ended, the latter council having decided upon an institution of their own. It was stated that the infectious diseases hospital at Penarth was the most appreciated public institution in the district; little or no trouble was now experienced in persuading parents to allow their children to be taken to the hospital for treatment. It was stated that Bridgend had been very free from infectious diseases of late years. In regard to the Garw and Ogmore infectious disease hospital at Blackmill, Dr. Williams stated that it was quite evident the hospital was beginning to be appreciated in the district for whose benefit it was intended. The committee, after considering the report, decided to urge the Gelligaer Urban District Council to proceed with the provision of an isolation hospital, and to ask the Caerphilly Council to open the hospital it had provided.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE REWARD OF MERIT.

AFTER a long illness, Dr. Winslow, Medical Officer of the Scrabby Dispensary District, co. Cavan, had some weeks ago to resign his appointment, owing to age and bad health, and asked the guardians for superannuation. There was a long wrangle at the board meeting as to what, if any, superannuation should be given him after his fifty years in their service. The majority at the meeting were in favour of giving him £80 a year, which was £20 less than he would have been entitled to under the Civil Service scale, but, owing to some informality, this decision was held to be invalid by the Local Government Board, and another meeting of the guardians was called to consider it. The observations of sundry of the guardians at that meeting are instructive. Some of them were of opinion that, owing to the large salary—£120—paid him for so many years, he was not entitled to any pension, as he should have saved enough out of it to retire on. Others said that, as there had never been any complaint against him, he ought to get something, but certainly nothing like £80 a year. Still a third party would give him £80 a year, because he could not live more than a couple of years to draw it. Eventually, by a majority, they allowed him £60 a year as a special favour. How any Irish Poor Law doctor can desire to remain an employee of such people when he has the chance—if the members of the profession exert themselves—of being freed from such thraldom, it is not easy to understand, yet it would seem that many Irish Poor Law medical officers are opposed to a State service.

WOMEN'S NATIONAL HEALTH ASSOCIATION.

The annual meeting of the Derry branch of the Women's National Health Association was held in the Union Hall, Derry, on March 5th. The Mayor occupied the chair, and there was a large attendance. The report showed that there was a membership of over 1,100 women; a successful babies' club had been established, and several public sanitary measures had been considered, which were strongly supported by the speakers.

BANDON WORKHOUSE.

The Local Government Board has recently reported most unfavourably as to the general condition of the Bandon Workhouse. When the inspector went round he found the dormitories dirty, and on the majority of the beds the sheets were filthy, the matron acknowledging that she was unable to say when the sheets had been last changed, there being no regular time for doing so. There are practically no baths for the main part of the house, as the two baths which are in the tramp wards are unfit for use, and are never used by the inmates. The men are supposed to have washing basins, but they could not be produced on the day of the inspector's visit. There are no proper sanitary arrangements. The closets are old-fashioned and primitive, and very difficult to keep clean. The sheets in the hospital were by no means as clean as they should be. Proper baths, with hot and cold water laid on, should be provided for the hospital. The removal of lunatics to another institution was advised, as the cells used by five non-dangerous lunatics were not fit for human habitation, the remaining lunatic cells being occupied by a man with skin disease and an old blind pauper.

CORK JOINT HOSPITAL BOARD.

At the monthly meeting of the Cork Joint Hospital Board held on March 8th, a deputation on behalf of the United Trades Association made representations as to prepared joinery imported from England and intended for the new sanatorium works at Streamhill. The president of the United Trades Association told the committee that there was no necessity for the importation of such work, for there were plenty of competent men available to do the work in Cork. He pointed out that there was a clause in the contract that all the carpentry and joinery work should be done locally, and he considered that the importation of this work was not only helping to continue the want of employment in the city but it was a slur on the character of the Irish workman. After some discussion it was decided that the contractor must be made to abide by the terms of his contract and not to use any imported joinery. Mr. Creagh announced that it would be necessary to make formal application to the Board of Works for the loan of £12,000, to be drawn in sums of £1,000. A sinking fund had been created, as the 1d. in the pound was being raised throughout the county, and his firm conviction was that a considerable portion of the cost of the building should be defrayed out of the proceeds of the rate accumulating That would leave a larger sum for administration when the institution was erected.

THE London Hospital Medical College Endowment Fund, to which an anonymous benefactor recently gave £20,000, has received a further gift of £100 from Miss N. A. Alston for the advancement of research at the college.

Correspondence.

SLEEP AND WANT OF SLEEP.

SIR,—The BRITISH MEDICAL JOURNAL of February 27th contains a suggestive paper by Dr. Robert Farquharson on sleep and want of sleep and a leading article on sleep and hypnotics, giving a concise and very instructive survey of the principal hypnotics in use. I am no longer in practice, but I have been so during more than fifty-five years, and may, therefore, be allowed to say a few words on this subject.

Dr. Farquharson justly directs attention to the late Arthur Durham's almost forgotten researches, leading him to the inference "that the physiological condition known as sleep results from an anaemic condition of the brain." I wish by no means to contest the correctness of the experiments of him whose memory is dear to me as to all who knew him intimately; but I cannot say that anaemia explains all the phenomena connected with sleep, and Dr. Farquharson seems likewise unable to do so. I have repeatedly discussed this subject with Mr. Durham, and he quite agreed with me that it was impossible for him to assume that the results of his experiments were sufficient to explain the phenomena of sleep in man. Amongst the different points of our conversation was also the question specially mentioned by Dr. Farquharson, why "short naps of five to ten minutes, snatched in the middle of work, or even of play, are so extraordinarily refreshing?" It is not the momentary state of the circulation and supply of blood alone by which we can account for this; it is probably connected with peculiar changes in the nerve cells of the brain; but I am as little able sufficiently to explain it now as I was at the time when Mr. Durham and I discussed the question more than forty years ago.

I venture to add a few words about the use of remedies for want of sleep. I fully concur with Dr. Farquharson's remark as to the necessity of paying attention to idiosyncrasy, which exists to a greater or lesser degree with regard to all the hypnotics—most commonly, in my experience, with opium and its derivatives, but also with the apparently most innocent, such as bromides; these have caused, for instance, in a strong man, after a few ordinary evening doses, in a case of Mr. Arthur Durham's, of urethritis, symptoms like ataxia at two trials, once with the potassium, once with the sodium salt. On the other hand, many of us, I think, are inclined to condemn a remedy as useless and dangerous when a more careful trial, sometimes in combination with another remedy, would show it to be very useful. Thus, chloral hydrate is at present too sweepingly condemned, while I have used it with great advantage, sometimes alone in ordinary doses, but more frequently in small doses, combined with bromides and with morphine, in persons who could bear the latter. I have, for instance, prescribed very often, according to circumstances, 3 to 6 grains of chloral hydrate, with 10 to 15 of a bromide and 5 to 8 minims of liq. morph. hydrochlor. In most cases such combinations had a beneficial effect, and in none that I know of an injurious one. We must bear in mind that the combination of smaller doses of several remedies allied in their action has frequently a better action than the single remedies in larger doses, and that in this way unwelcome effects can be avoided. I need not say that in every case I have endeavoured to dissuade patients from continuing the remedy without the well considered advice of their doctor. Other hypnotics, too, I have often combined, such as bromural and chloral hydrate, trional and chloralamide, trional and paraldehyde, veronal and paraldehyde. Long experience, however, has convinced me that hypnotics are much more frequently given than is either necessary or useful, and, further, that many persons fall into the habit of taking them, and through this injure their nervous or circulatory or digestive system, or all three, and their resisting power to disease, and cause premature senility and death. I have generally prescribed hypnotics only in mental distress or bodily pain, or prolonged wakefulness from intrusion of anxious thoughts, and occasionally for night travelling and sea voyages.

A certain amount of sleep is necessary and is the "chief nourisher in life's feast," but many persons indulge in too much sleep and injure their nervous and circulatory systems. The difference in different people in the amount of sleep required is very great; children and growing persons require much sleep, while the majority of adults require much less. Experience has taught me at an early period, that there are many people who without injury to their health can do with comparatively little sleep (four and a half to five and a half hours), and need not on account of short hours of sleep, or frequent interruptions of it, fly to the use of hypnotics. I could give many instances and will mention my own case. I have never been a good sleeper, not even at school, and later on in active life, often from anxiety about my work, my hours of sleep were short and often interrupted; I was very seldom more than six hours in bed, and mostly woke literally ten to twenty times and oftener during the night, and only rarely had short naps during the day. My health in the 86th year shows that the limitation of sleep has done me no harm. Mostly when I was able to persuade my patients that lying awake part of the night, and frequently waking, did them no harm, they gradually felt that they could do with little sleep, and often began to sleep better.

I may add that I made many trials on myself with different hypnotics as they were introduced into practice, as well with each separately as also with several in combination; I did this, however, not to procure sleep for myself, but in order to learn their action and the advisability of using them in others.

I have also tried many other little helps to procure fair nights without hypnotics, but it would require much more space, and I have already trespassed in this matter.—I am, etc.,

Grasse, Alpes Maritimes, March 2nd. HERMANN WEBER.

SIR,—I see by the discussion going on in the JOURNAL that the physiology of sleep is not much more settled than it was when I wrote about it in 1875, and I do not think the suggestion I then made has ever been discussed. May I, therefore, briefly repeat it for the consideration of those who are versed in the advances which physiology has made since that date?

In the introduction to the third edition of my book *On Winter Cough*, I attempted to explain the relation between certain cases of "spasmodic asthma" and of "sneezing asthma" and the phenomena of sleep. I discussed the subject at considerable length, but I will now only extract the passages in which my hypothesis as to the physiology of sleep is stated as follows:

> The hypothetical explanation which I have suggested (of these cases) *is an intermediate state common to all the given antecedents;* and in answer to the question, What is this intermediate state? I suggest that it is distension of the perivascular system of canals with liquor sanguinis migrated from the red-blood vessels; that in the normal state an immediate return of fluid from the perivascular system to the red-blood vessels takes place on the return of normal circulation in them, and that the abnormal condition which exists in the peculiar cases under consideration consists in a derangement of this power of *instantaneous change of place* between the contents of the two sets of vessels (p. xxxii). . . . If this hypothetical explanation which I have suggested should prove to be correct, it would apparently involve the conclusion that, if a contracted condition of the red-blood vascular system of the brain is a necessary condition of sleep, this is coincident with the migration of liquor sanguinis into the perivascular canals, by which concurrence of circumstances the necessary element of equally-balanced cerebral pressure is maintained, while the element of functional excitability, due to the abundant circulation of red blood, is removed. Thus functional rest without arrest of nutrition is secured. If this reduction of red-blood circulation with the substitution of liquor sanguinis saturation is the cause of sleep, it will account for many of the phenomena of cerebral disease and their relation to sleep, and to ordinary causes of cerebral hyperaemia which are unexplained by the theory of *cerebral anaemia without perivascular saturation* (p. xxxiv).

I have been too long out of the arena of physiological discovery to be competent now to re-enter upon the discussion of this subject; but I think the hypothesis is worth the consideration of those whose knowledge is up to date, and who are now specially interested in the very important question of sleep.

In conclusion, to turn from theory to practice, let me give two prescriptions, which have served me "so many a

good turn" in procuring sleep for my patients, that I hope they may do the same for others. First, instead of *shutting* the eyes, as people generally do when they want to go to sleep, let the patient be ordered to *strive to keep them open* to the last possible moment. It is surprising how often they will then *close in sleep* in spite of every effort to keep them open. The room should be feebly lighted, but on no account dark; darkness is often fatal to sleep.

Second, ℞ Tinct. castorii ʒj, tinct. chloroformi co. ʒiv, tinct. lavandulae co. ʒj, spir. camphorae ʒiv, spir. etheris nit. ʒj; Ft. guttae ʒiv. A teaspoonful in water when nervous or sleepless.—I am, etc.,

HORACE DOBELL, M.D.(retired).

Parkstone Heights, Dorset, March 5th.

A MEDICAL DEGREE FOR LONDON STUDENTS.

SIR,—The scheme for establishing a system of conjoint examinations between the Royal Colleges and the London University demands the closest scrutiny and the most careful safeguarding lest its results should be found as nugatory as those of every attempt hitherto made to provide a degree on fair terms for London medical students. As I understand the scheme set forth in p. 607 of your issue of March 6th, it provides as follows:

The London University is to continue to confer its degrees on the terms it now requires, but these degrees are to be termed "honours degrees."

The Royal Colleges are to continue to confer their diplomas as heretofore, under the conditions and titles that now obtain.

The University and the Royal Colleges are to combine to conduct examinations of students who shall have spent not less than four years in study at London medical schools and hospitals, and who shall have complied with certain other conditions, and those who pass these examinations will not receive a diploma from either college, but will receive a pass degree from the University.

The University will, therefore, in future confer two sets of degrees: M.B., B.S., M.D. (and query M.S.) Pass, and M.B., B.S., M.D., and M.S. Honours.

The Conjoint examinations will continue, but will henceforward be held by three conjoint bodies instead of by two; the number of conjoint examinations preliminary to qualification will be increased from two to three, or, including the preliminary general examination, from three to four; the reward for passing the conjoint examinations will be an M.B., B.S., instead of the L.R.C.P., M.R.C.S., and, on passing a further conjoint examination, the M.B., B.S. may be converted into an M.D. This is the scheme as I understand it, and it is open to the following criticisms:

The great obstacle to the attainment of the medical degrees of the London University by the ordinary student is not the difficulty of the professional examinations, high as the standard of these examinations is; the main obstacle is the matriculation examination. If the scheme is to be a practical success, it is essential that the University shall admit, to the conjoint examination, candidates who have passed, in lieu of matriculation, the entrance examinations now sanctioned by the existing Conjoint Board. Will the University consent to this? It is over the matriculation examination that it has shown itself most impracticable. If it does consent, are these preliminary examinations to stand as matriculation for the pass medical degrees alone, or are they to be homologated with the other alternatives to matriculation, or to serve as a portal of entrance to all the degrees of the University? If the former, will not the medical pass degrees be held in disesteem, and their holders to have entered the University by a back door? If the latter, the main obstacle to the attainment of the existing university degree will have been removed, a much larger contingent of London medical students will go for the honours degree, the necessity for the Conjoint pass degree will be diminished, and its reputation will be still more affected.

What are to be the facilities or difficulties of the holder of the pass degree in proceeding to the honours degree, should he desire to do so? If the entrance examination for the pass degree is a special examination, admitting to that and to no other degree of the University, then, in order to proceed to an honours degree, the M.D. pass must go back to school and work up his preliminary subjects while he is in the middle of his professional career—precisely the barrier that keeps so many able men from attaining the University degree under the existing regulations. If, on the other hand, he may proceed to the honours examinations without suffering this indignity, then there will be one rule for the Medical Faculty and another for the other faculties, which will scarcely satisfy the University.

The substitution of three professional examinations for the two in the present curriculum before the Conjoint examinee can obtain his diploma is a handicap to the London medical student in comparison with the alumni of other universities. The grievance of the London medical student is that for the same expenditure of time, labour, and money for which a provincial student can obtain a university degree, the London student can obtain the Conjoint diplomas only, which, although well known in the profession to represent professional attainments equivalent to a university degree, are not so regarded outside the profession. What the London student wants, and what he is entitled to, is a degree obtainable on the same terms as those on which he now obtains his Conjoint diplomas. If he is offered a degree that cannot be obtained except on terms more stringent than those open to the provincial medical student his grievance is not removed. If this degree, obtainable on more stringent terms than degrees in provincial universities, is yet to be regarded as a one-horse degree, avowedly inferior to all the other degrees of the University and rendered specially easy to suit weaker brethren, his grievance will be not removed but intensified. Insult will be added to injury. He will still be giving more and getting less than his provincial compeer.

What will be the several standards of the four grades of degrees? Presumably the M.B., B.S., M.D. and M.S. Honours will stand at their present level, and the standard of the pass degrees will be lower. Presumably, also, the M.D. Pass will be a higher degree, and will satisfy a higher standard than the M.B., B.S. Pass, but what relation is the M.D. Pass to bear to the M.B., B.S. Honours? It can scarcely be adjusted to a lower standard. If so adjusted, or if adjusted to an equal standard, would not the M.B., B.S. Honours men have a legitimate grievance in that, having proved themselves of superior, or at least equal, attainments to the M.D. Pass men, they would be fobbed off with a degree titularly inferior? If, however, the M.D. Pass is to be a higher standard than the M.B., B.S. Honours, what will be the difference between the M.D. Pass and the M.D. Honours, and what will be the advantage of the whole arrangement?

What was the object of the Royal Colleges in referring the matter to the Royal Commission? Either Statute 123 of the University of London provides the necessary powers for the constitution of the scheme or it does not. The report of the delegates is made on the assumption that it does. Why, then, incur the uncertainty of convincing the Royal Commission? Why seek the delay inevitable in the presentation and effectuation of the report of a Royal Commission having such an immense scope of reference, a report that will require an Act of Parliament to bring it into effect? Is it that the delegates suspect that the University will not consent to the scheme except under the compulsion of an Act of Parliament?

Lastly, to my mind, the scheme as adumbrated exhibits one defect that seems to me capital. It makes provision for the future only. It offers no redress to the immense number of medical men who by taking the L.R.C.P., M.R.C.S., have proved that they have attained the standard of proficiency required for a university degree, but have not obtained that degree. I am of opinion that any powers the Royal Colleges may obtain for the conferment of a degree should be retroactive, and that the holders of the conjoint diplomas should be at liberty to exchange these diplomas for the new degree of M.D.

I do not say that the difficulties and defects that I have pointed out are enough to render the project impracticable, but it cannot be denied that together they are very grave. It is possible that the working scheme the delegates have in their minds may provide against most or all of them; but the views of the University have yet, it seems, to be ascertained, and the University has hitherto steadily

resisted every attempt to make its degrees more accessible to London medical students.

Looking to the inherent difficulties of the scheme; to the uncertainty of securing the consent of the University and the approval of the Royal Commission; to the likelihood that the scheme, even if accepted by these bodies, will first be so modified as to deprive it of much of its value; to the long delay that must of necessity occur before the report of the Royal Commission can be enforced by Act of Parliament—it seems a pity that the Royal Colleges did not take their courage in both hands, and apply for Charters which would give them the power themselves conjointly to confer a degree of M.D., without requiring any concurrence with the University. This I believe to be the best, if, indeed, it do not prove to be the only, practicable solution of the difficulty.—I am, etc.,

London, W., March 4th. CHAS. MERCIER.

STATE REGISTRATION OF NURSES.

SIR,—We have read with much interest the account of the movement in favour of the State registration of nurses, which appeared in the BRITISH MEDICAL JOURNAL for February 13th—a movement with which we are in complete sympathy. We write, however, to point out that there is a large body of nurses—namely, fever nurses—which so far has been quite ignored by the various associations which have interested themselves in State registration. This has been due chiefly to the fact that, though it is a body of very considerable magnitude, it is only recently that its organization has been taken in hand. Nearly all the nurses to whom we refer are in the employment of municipal authorities, and they constitute a very distinct and important service. The Fever Nurses' Association has been formed for the purpose of organizing this service, furthering its interests, and raising and maintaining its standard of training. We are of the opinion that any scheme for the State registration of nurses which does not recognize the special training the fever nurses receive, will be incomplete. Nurses in fever hospitals consist principally of two classes—the one, of those who, after a three years' training in a general hospital or infirmary, spend some time in a fever hospital to gain special experience; the other, of those who enter the fever hospital without having undergone the previous general training. The latter often spend several years in fever work. We wish it to be clearly understood that we in no way advocate the establishment by the State, in connexion with the registration of nurses, of a separate register of fever nurses, such as it is proposed to institute for mental nurses. We hold, however, that those nurses who are eligible for enrolment on a State register should be definitely credited with the additional experience they have gained in the nursing of fevers, and, in supporting any endeavour towards the establishment of State registration of nurses, we shall at the same time do all we can to secure the due recognition of the fever nurse.—We are, etc.,

E. W. GOODALL,
President.

F. FOORD-CAIGER,
Chairman of Executive Committee.

JOHN BIERNACKI,

L. A. MORGAN,
Honorary Secretaries, Fever Nurses' Association.

London, March 1st.

SOUTHWOLD LIBEL CASE.

SIR,—My attention has been drawn to an appeal in the BRITISH MEDICAL JOURNAL of February 6th, p. 353, asking for subscriptions to defray the "heavy expenses" which two members of the Association "have incurred as the result of the recent action which they were called upon to defend."

The appeal does not state upon what grounds we are asked to support these gentlemen, who have apparently been cast in heavy damages for a malicious libel upon a brother practitioner.

The appearance of this appeal in the columns of our JOURNAL would certainly appear to indicate that it is issued with the sanction of the Association, if not even with its official approval.

To the ordinary self-respecting medical man it would not appear to be a case in which much sympathy is required, as these gentlemen have been found to have committed what seems a very cruel offence, and not some heroic action worthy of a reward.—I am, etc.,

London, W., Feb. 6th. FRED. J. SMITH.

THE REPORT OF THE PUBLIC HEALTH COMMITTEE.

SIR,—There seems to be a singularly extravagant development amongst the members of the medical profession, both individually and collectively, of that predatory instinct which is always on the alert to appropriate another man's "job."

It was seen a little while ago, in the endeavour to take away the public vaccinator's work and distribute it amongst all and sundry, regardless of the fact that the net result would have made it of very little benefit to anybody. And what has been the result? Well, soon there will be whole-time public vaccinators at £250 a year or less, and so much less will go to the emoluments of the general practitioners.

I have been struck recently with the extremely short-sighted policy of the general practitioners, as shown in the JOURNAL and at the Branch meetings, by trying to abolish all medical officers of health who hold any private practice. What will be the result? That all those general practitioners who are now medical officers of health, or nearly all of them, will have their appointment confiscated; for it is absurd to suppose that the salaries will be such as to tempt men to give up anything like a moderate practice; and the net result will be that some thousands a year will be diverted from the emoluments of the general practitioners of the country.

We have let the midwifery go; we have let school inspection go, and apparently we are trying to throw the health appointments overboard; and all that remuneration and prestige will be lost to the general practitioners, and there will be just as many of them left to "cut each other's throats" for what private practice is left.

Is it not patent to anybody who has eyes to see that the whole end and aim of the powers that be is to get all the practice out of the hands of private practitioners, and substitute a public service of "inferior" specialists, midwives, lady inspectors, oculists, school inspectors, public vaccinators, Public Assistance doctors, medical officers of health, etc.; in fact, a big staff of more or less junior officials who will be hidebound by red tape and sweated as much as the man with only one string to his bow can be?

Would it not be better for the general practitioners to try and keep as much of the work of this nature as they can, and as they are unquestionably better fitted for than "small specialists"?—I am, etc.,

A GENERAL PRACTITIONER WHO IS ALSO A
March 9th. RURAL M.O.H.

MUNICIPALIZATION OF HOSPITALS.

SIR,—Although not in favour of hospital municipalization, may I point out that the arguments quoted in the BRITISH MEDICAL JOURNAL of March 6th, p. 625, from the speech of Dr. Horrocks, are hardly those that will satisfy the Socialists.

"Every one who paid rates would be eligible for admission." This now obtains in the fever hospitals, and the paying of rates is no bar to admission in most general hospitals, which are open practically to all.

"The pushing and energetic would soon occupy the beds to the exclusion of the poor and needy." Here, in practice, the opposite occurs; for in general hospitals the better-off keep out the poor; whereas in municipal (fever) hospitals the poor get "relatively" vastly better value from their illness, and their cases have paramount care.

"The staff, instead of being voluntary workers, would become officials, and . . . it would be necessary to reduce the number, as it would be impossible to pay so many of them adequately." True, but the "officials" would then be mostly "whole-time" men, and would be paid. The staff of the fever hospitals, asylums, army, navy, prison service, infirmaries, public health service, School Board service, police medical service, clubs (!), limited companies, etc., do their work no less well because they receive salaries more or less adequate. Doubtless the personnel of the directors would be inferior socially, but in many

cases would not differ materially from what at present exists—for example, in Edinburgh the Lord Provost is at the head of both the infirmary and the municipal hospital (fever) management.

For the large endowed hospitals with traditions, municipalization is impracticable, as it would involve huge litigation over the moneys left in trust by the charitable, but I believe it would do in the case of smaller general hospitals about to be built in rising working-class neighbourhoods, and that the younger generation of practitioners would profit by the salaries, assuming always that the present declension in private practice continued on its apparently irremediable down grade.—I am, etc.,

Edinburgh, March 9th. JAMES CAMERON.

THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION AND THE TREATMENT OF SCHOOL CHILDREN.

SIR,—There is an error in your note referring to the meeting of the medical officers attached to the Metropolitan Provident Medical Association on March 2nd. The meeting was not well attended by the profession; of the 114 doctors on the staff only about a dozen were present. In my remarks I stated that the poor attendance was probably due to the unusually severe weather causing so much extra work.

An amendment was proposed by myself to the second resolution—that the association would only undertake the treatment of school children whose parents or guardians were unable to pay doctors in the ordinary way. This would prevent the contemplated departure from the lines on which our provident dispensaries have hitherto been worked—namely, to provide medical attendance for those who cannot pay in the usual way. Moreover, the amendment would be in accordance with the views expressed by the British Medical Association in its report on provident dispensaries. Mr. Leon and Sir William Bousfield spoke in opposition to my amendment, which, I regret to say, found no seconder.—I am, etc.,

London, W., March 8th. HENRY H. STURGE.

OPHTHALMIC SURGEONS AND SPECTACLE VENDORS.

SIR,—It is to be hoped that before long some rules will be made to regulate the relationship between spectacle vendors and ophthalmic surgeons, and in certain directions it is perhaps desirable that there were some means of enforcing a higher standard of professional conduct on a very few of the gentlemen who practise ophthalmic surgery. The following events will perhaps convince a casual reader that some change is necessary if irregular practice is to be held in check and properly qualified men are to have fair play. A nurse on holiday at a watering-place in Scotland advertised her address extensively in the local papers stating that she would be glad to see ophthalmic patients, particularly those requiring the testing of errors of refraction. It seems that this woman happened to be a nurse at an ophthalmic hospital in England, and was employed by the surgeons there for the purpose of testing such cases.

A somewhat similar incident was brought to light the other day—namely, that for one ophthalmic hospital an attendant in an optician's shop in the town in which this hospital is situated does a large portion of the refraction testing. I think that thereby the authorities responsible for this hospital simply help to propagate quack practitioners. A patient happened to come into my hands who had been tested in this shop, possibly by the attendant who was employed at the hospital. The correction which was given was for each eye cylinder minus 1, axis horizontal, the real correction was spherical plus 2.5 for each eye.

Ophthalmic surgeons should steadfastly, not only in their own interests but in the interests of the public, set their faces against practices of this sort. To some extent members of the profession are blameworthy in the matter. A child complains of some little difficulty of vision, and a large number of the medical fraternity do not send that child either to an ophthalmic surgeon or to an ophthalmic hospital, but recommend it to a shop to have its eyes examined. They do not seem to be aware of the fact that it takes even the best trained surgeons from an hour to an hour and a half to obtain accurate and trustworthy results, and that any error in the correction may spell disaster for that patient so far as sight is concerned.

In other respects changes are needed. Thus, in a British ophthalmic hospital members of the staff have been known to admit, with full knowledge of the fact, so-called optologists to their clinics. It seems to me that such conduct is entirely wrong, and I hope that some day or other persons who in this way countenance irregular practitioners will be adjudged guilty of conduct infamous in a professional sense. One of the worst cases of the countenance of irregular practitioners occurred not long ago, when a member of an ophthalmic congress introduced to its meetings a spectacle vendor in such a manner that the gentlemen attending the meeting understood the man to be an ophthalmic surgeon.

There are other matters in the relationships of ophthalmic surgeons to spectacle vendors which ought to be put right. Some years ago an advertising spectacle vendor put in as a special bait in his advertisements that if he did not manage to fit the patients himself he would recommend them to have recourse to a skilful and experienced oculist. One general practitioner in the town sent a number of patients to this optician, and they were every one of them referred, with a card, to one particular ophthalmic surgeon. Would the General Medical Council regard this as canvassing for patients?—I am, etc.,

March 2nd. SPECIALIST.

THE TREATMENT OF CANCER.

SIR,—It is interesting to contrast two papers which appeared in the JOURNAL of last week on the subject of cancer. Mr. Sampson Handley appears to look at treatment in a somewhat peculiar way. He says in effect that because cancer occasionally cures itself a cure for cancer cannot exist, but he somewhat illogically excludes Coley's fluid. He goes on to make this statement: "For every cancer which reaches its full clinical development, it may be that a hundred are strangled in the process of birth, etc." This is rather strange in a scientific paper when supported by not a vestige of evidence. Mr. Handley also suggests as suitable cases for experiment advanced cases of cancer of the stomach. Instead of doing this, I would advise trying any favourable line of treatment on an early case, say of ulceration of the tongue. The correct treatment at present is to operate after mercury and potassium iodide have failed to check the ulceration. Medicine is given to show if operation is necessary, then why not go a step farther and try something else for say two weeks? I did this successfully in a case five years ago. Whether the diagnosis of epithelioma of the tongue was correct or not I am not prepared to say, but I can state that had I not treated him for cancer empirically the man would have had half his tongue removed.

In contrast we have Dr. Fenwick's paper—simply a record of clinical facts. I would like to suggest that any one trying his treatment should keep a record of the condition of the blood, and especially of the differential white cell count. It would be especially interesting to know what happens to the white cells in the cases which suppurate.—I am, etc.,

London, W., March 9th. GEORGE E. KEITH.

SIR,—The scientific and lucid exposition of the natural cure of cancer in the JOURNAL of March 6th is of great interest to all of us; but it is of especial interest to me, in so far as in the last paragraph Mr. Sampson Handley indicates a line of treatment advocated with emphasis by me[1] six years ago—"the open-air treatment," with a reduced diet. In my argument I instanced the case of such treatment of tubercle, but did not push the analogy, because I did not know then as I do now that the natural cure of cancer is by the same process as tubercle—that is, fibrosis. That position being demonstrably established by Mr. Handley, the case in favour of my proposition is greatly strengthened, and all that remains is to put it to the test of experiment. I quite, however, disagree with his recommendation that "under no circumstances whatever should the treatment be recommended as a substitute for operation, if operation is possible."—I am, etc.,

London, E.C., March 9th. HOPE GRANT, F.R.C.S.E.

[1] *The Medical Press and Circular*, November 12th, 1902.

SIR,—Mr. Fenwick, in his paper on the treatment of cancer by potassium bichromate, mentions my name as having refused to treat a simple small rodent ulcer. This is absolutely incorrect.

Before making such a statement, Mr. Fenwick might easily have communicated with me; but that does not appear to be his idea of medical etiquette.

In the only other case of mine where to my knowledge his treatment has been tried, my first and only intimation that he was in attendance was a message brought by a son of the patient, saying, "Dr. Fenwick says you will not be wanted at our house any more, as he will look after mother."

Shortly I was again called in to soothe the last hours and sign the patient's death certificate.—I am, etc.,

T. FRANKISH, M.B.,

March 6th. Honorary Surgeon, Victoria Hospital, Accrington.

THE APPLICATION OF MENDELIAN CHARACTERS TO MAN.

SIR,—We have, I think, almost reached the limits of usefulness in this discussion, but it is desirable to sum up the stages of it, so that your readers may appreciate whether I have made a "surrender" or "gone off at a tangent."

1. In a public lecture given by Dr. Drinkwater a statement was made that Nettleship's nightblind pedigree was an illustration of Mendelism, and sensibly gave in the offspring of abnormals the required 50 per cent. of abnormals. There was no warning whatever that Dr. Drinkwater was calculating the offspring of abnormals in a hitherto unheard-of manner—namely, by omitting all those cases in which an abnormal chanced to have no abnormal children. Hundreds of returns have been made by the Mendelians, but not one before Dr. Drinkwater has adopted this remarkable method of calculation.

2. I pointed out in your columns that the hitherto accepted Mendelism showed that in the Nettleship pedigree there were 137 abnormals and 235 normals in the offspring of the abnormals (various other counts, ranging from 131 to 137, may be made, until several obscure points in the pedigree as at present constructed are cleared up, but such divergencies do not alter the matter). This is no approach to 50 per cent.; indeed, the odds against a deviation so large as this are more than 10,000,000 to 1.[1]

3. Dr. Drinkwater wrote to the BRITISH MEDICAL JOURNAL explaining the manner in which he had calculated his percentages—namely, by omitting the offspring of all abnormals who had only normal offspring, and justifying it on the ground that he believes that dominance changes with the mating. He cited Ewart and Thomson as believing that it changed *in* the mating, not, apparently, because he held this view himself, but because it might confirm his view that it changed *with* the mating.

4. My reply was, and is still, that this change of dominance may be perfectly correct—or the reverse; but that:

(*a*) It is destructive of the first Mendelian principle of dominance;

(*b*) It renders the second Mendelian principle of segregation of small value, because the segregation will not take place in the recognized Mendelian principles.

(*c*) It would invalidate much Mendelian work which has included in calculating percentages the offspring of abnormals with only normal offspring.

(*d*) It renders Mendelism of no service to the medical profession, because it will be impossible to say until an abnormal has completed his family whether he is a true Mendelian abnormal or a Drinkwaterian spurious abnormal with a capacity for producing only normal offspring. Further, by a judicious change of mate, even if he had had abnormal offspring, he might improve matters, and have unaffected children!

Shortly, my contention is that Dr. Drinkwater's method of dealing with Nettleship's pedigree is destructive of Mendelism, which, whether correct or incorrect as a description of hereditary phenomena, is at least a logical whole. It is quite possible that a determinantal theory of alternative characters may eventually account for many such cases, and when this has been done the credit will lie largely with the movement dating from Mendel. But, until it is done, I for one shall continue to protest against the current tendency among what I shall venture to term the free lances of Mendelism—as distinct from the staff corps—to drag into popular lectures and magazine articles as illustrations of Mendelism cases which can only be termed Mendelian if a method of counting *ad hoc* be invented, or if odds, which only a tiro in the science of observation would overlook, be disregarded.—I am, etc.,

KARL PEARSON.

Biometric Laboratory, University College, March 7th.

[1] Those who wish to study whether their observations are in accordance or not with theory will find the determination of such odds fully explained in Westergaard's *Grundzüge der Theorie der Statistik*.

ARTERIAL BLOOD-PRESSURE RECORDS BEFORE AND AFTER MUSCULAR EXERTION.

SIR,—Dr. Leonard G. J. Mackey criticizes the conclusion I arrive at in the JOURNAL of February 27th when I point to the "improbability that the heart in morbid conditions would be capable of overcoming pressures much greater than 160 to 170 mm. Hg" (Dr. Mackey, in quoting my words, has, I feel sure, unintentionally omitted the word "much"), assuming that this measurement is near the limit of reserve power of the normal heart.

I venture to think that the point which Dr. Mackey overlooks is that the question is one of reserve power. It is, I believe, generally admitted that the reserve power of a hypertrophied heart is less (and less in proportion to the degree of hypertrophy) than that of a normal heart.

Of course every one recognizes the fact that a heart in a case of long-continued high arterial blood pressure becomes hypertrophied, and overcomes greater pressures than the normal heart usually does.

My point is that it is reasonable to assume that such a hypertrophied heart, although working at a higher average pressure than the normal one, is, owing to the fact of its having less reserve power, unlikely to be capable of dealing with pressures much greater than the normal heart can when this is working at near the limit of its reserve power.—I am, etc.,

London, W., March 6th. OLIVER K. WILLIAMSON.

PULMONARY TUBERCULOSIS IN CHILDREN.

SIR,—I am very glad to see that Dr. Fisher has drawn attention to the sweeping assertions of Dr. Mary Williams with regard to phthisis in school children.

After a large experience with children, I should be inclined to say that phthisis in school children is one of the rarest diseases. The conditions which are so often mistaken for phthisis are the non-tuberculous conditions of fibroid disease, often with some bronchiectatic dilatations.

The condition seems to arise chiefly from antecedent bronchitis from within and from pleurisy from without. I have frequently had typical cases of fibroid disease, with and without the cardiac displacement that so often accompanies it, brought to me as tuberculosis. I am inclined to think that if the majority of those inspecting children were asked how often they had seen fibroid disease in children the answer would be that it was practically non-existent, whereas I think that if reliable statistics could be obtained they would be found to vary very considerably from those of Dr. Williams.—I am, etc.,

March 8th. ELWIN H. T. NASH.

RURAL NURSING ASSOCIATIONS.

SIR,—Among other subjects which are now calling for attention from the members of the Association is that of the local nursing associations which are rapidly being established throughout the country. Ostensibly introduced to assist the medical attendant, and to work under his directions in the interests of the sick poor, the nurse in many cases becomes a serious competitor for minor medical and surgical practice. The managing committee consists of a group of the usual well-meaning female busybodies, on which the local practitioner is often not in any way represented. A general canvass of the district is made, cases are sought for in all ranks of society, and touting is openly and avowedly practised. Not merely the poor, but the small farmers and tradesmen of the villages are entreated to employ the nurse and midwife, with the assurance that if anything goes wrong the doctor, who has always hitherto attended them, can be called in. In some cases I have been told the nurse makes a friendly call on nearly every case under medical treatment, the usual gossip

ensues, with a criticism of the diagnosis and treatment of the case, not always to the advantage of the medical attendant. In fact, in many parishes an active unqualified practitioner has been introduced, backed up by a body of ladies, whose interest it is to make the thing a success, and the unfortunate doctor finds that, although it is illegal for him to employ an unqualified assistant, he is met by the keen competition of an unqualified woman, not merely in midwifery, but in ordinary medical and surgical practice. In country districts a serious difficulty arises, and one equally injurious to the general public and to the medical profession.

The remedy, in my humble opinion, is to make the representation of the profession imperative on every nursing association, and no association should be recognized unless a medical man is placed on the executive and local committees. Touting should be discontinued, and no member of the British Medical Association should give assistance or sanction to any nursing association that does not loyally carry out these principles.

Lest it should be thought I write from personal motives, I would say, "Our withers are unwrung." If the members of the profession will refuse to back up these unqualified practitioners, the difficulty will soon settle itself, but it must be by united effort and loyal co-operation.—I am, etc.,

Leckhampton, March 1st. WM. MILLIGAN.

Public Health AND POOR-LAW MEDICAL SERVICES.

RESIDENT WORKHOUSE OFFICIALS IN THE DARTFORD UNION.

IN the BRITISH MEDICAL JOURNAL of December 19th, 1908, p. 1847, it was noted that the members of the nursing staff of the Dartford Union were at that time in a state of serious dissatisfaction owing to the treatment they were then experiencing under a fresh order of the board; the effect of this order was to deprive them of the sole occupancy of some of their own quarters, other officials of the house having been given permission to share the rooms; the nursing staff was thus deprived of the privacy they so greatly needed when temporarily free from duty with their patients. We now read in the *Dartford Express* that at a recent meeting the board of guardians, after further consideration, has rescinded its former order, and has thereby restored to the nurses the exclusive use of their own dining room. It may hardly be correct for us to assume that the opinion expressed in the JOURNAL in opposition to the views of the guardians has led to this change, but we cannot help thinking and even hoping that it may have accelerated the settlement of an unhappy difference on an important matter, which appears to have been somewhat suddenly sprung upon the nursing staff by the governing body. No doubt the nurses have expressed to the board their gratitude for its final decision, which appears to have effected a restoration to them of all their former comforts and privileges.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Thingoe (West Suffolk) Rural District.—Between the census of 1891 and that of 1901 there was a decrease in the population in the rural district of Thingoe of 1,215 persons, but Dr. Scott Kilner bases his statistics upon the population recorded at the last census (14,528). The birth-rate on this basis was 22.9 per 1,000, and the death-rate 13.2. The infantile mortality-rate was equal to 75 per 1,000 births. The District Council will be well advised to take the advice of their medical officer of health and utilize for cases of infectious disease, other than small-pox, the iron hospital which was erected some years ago. It was intended to be used only for small-pox patients, but has never yet been occupied.

Maldon (Essex) Rural District.—The population of the Maldon rural district at the last census was 14,630, showing a decrease of 1,111 persons since the previous census, but the population at the middle of 1908 was estimated by Dr. Thresh at 14,800, and he thinks this is rather below than above the actual population. The birth-rate in 1908 was 24.4 per 1,000, the death-rate 12.7, and the infantile mortality-rate equal to 61 per 1,000 births. In his description of the methods of dealing with infectious disease in the Maldon district, Dr. Thresh states that after the removal or recovery of a patient the house is disinfected. On rare occasions bedding, etc., is removed and disinfected by steam, but the ordinary method of disinfecting by burning sulphur and the thorough cleansing of the infected house produced such good results that apparently no more complicated, troublesome, or expensive process seemed necessary. Comparing the localities in which he had insisted on steam disinfection in practically all cases with those in which such disinfection had not been insisted upon, he had not found the slightest reason to think that steam disinfection was necessary. His experience related to thinly-populated areas, and did not apply to towns.

Medico-Legal.

WORKMEN'S COMPENSATION CASES.

Compulsory Operations.

ON February 18th His Honour Judge Dodd heard an application made by Walter Hall and Co. for the suspension of the compensation paid to Joseph Charlesworth on the ground that if he underwent a slight operation he could resume work. It appeared that respondent was a blacksmith's striker, and on April 7th last year, whilst working in a foundry, got his finger caught under a steam hammer. The finger was seriously injured, and the man was now in receipt of 10s. per week compensation. The finger was bent, and the tendons were so involved that the bent condition must continue, and the application was for an order that Charlesworth should have his finger removed, which operation, he suggested, would place the man in a position to earn as much as before.

Judge Dodd: It is a serious thing to ask the court to say that a man shall undergo a serious operation.

Mr. Clegg, on behalf of the employers, observed that it was impossible for the finger to improve, and that the operation suggested was a simple one.

The Judge: The doctor's view of what is a simple operation is not quite sufficient. They are rather fond of operations.

Mr. J. Raley (on behalf of Charlesworth) said that his client was not unwilling to undergo an operation, and if the doctors were unanimous that it would do him good he would undergo it at once, but they did not agree. Mr. Raley added that he was going on the principle that a man could not be acting unreasonably if he was following medical advice.

Dr. J. H. L. Allott, of Barnsley, who had examined Charlesworth, gave evidence that he would be better with the finger off. In the course of cross-examination he admitted that there was some slight risk attendant upon the operation.

Dr. Martin, house-surgeon at the Beckett Hospital, said the man ought to have his finger taken off.

Dr. Harold Horne, asked if he advised the man to have his finger taken off, replied "Certainly not," and Dr. Wallis said he agreed with everything Dr. Horne had said, and disagreed with everything Dr. Allott and Dr. Martin had said.

His Honour, who was assisted by Dr. Fryer as medical referee, said it was not unreasonable that the man should desire to wait a little longer before undergoing an operation of this sort, and he therefore dismissed the application with costs.

GIVING NOTICE.

R. R. R. asks what is the usual notice given by a medical principal when he wishes to discontinue his assistant's services.

*** In the case of an indoor assistant, the usual notice given is one month. In the case of an outdoor assistant or the manager of a branch, a longer notice is not infrequently given. It is assumed in these cases that the assistant is paid monthly. Where the salary is paid quarterly or half-yearly, a longer notice would be necessary. The law requires a "reasonable notice," and in fixing what is reasonable the criterion usually is the time when the payments of salary become due. Many principals arrange with their assistants on engaging them what notice shall be given on either side.

MIDWIFERY NURSES' ENGAGEMENTS.

ASTOUNDED.—Our correspondent was unwise in acting as he did. It was his patient who engaged the nurse, and had a right to require her services at the time agreed. The action against him should fail, as the nurse was bound by her previous contract to come to his patient, but unless she explained to her former patient that she might be called away, she might herself be liable for damages. He should place the matter in the hands of his solicitor, or, if a member of a medical defence society, ask for its assistance.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

MEDICAL PRACTITIONERS AND DRUGGISTS.

R. T. J.—(1) It is generally recognized that it is not desirable for a qualified practitioner to have his consulting rooms at a chemist's shop, but we know of no rule forbidding it. (2) A qualified chemist who is also a qualified medical practitioner can, if he chooses, carry on both businesses, but it is not a desirable combination.

INTRODUCTIONS TO PRACTICE.

NU.—If no agreement was entered into by either party, and if Dr. A. has finally broken off all negotiations, our correspondent would seem to be free to do as he pleases.

BRANCH SURGERIES.

SANDY LANE complains that a medical competitor took away a good paying patient by establishing a branch surgery in her house; and now he finds that another patient, a midwife, has hung her framed certificate in the window, side by side with the hours of attendance of the doctor.

*** We have repeatedly drawn attention to the manner in which branch surgeries may be abused; but we are not sure that there is any just ground of complaint if a medical man becomes the tenant of the patient of another practitioner and in course of time the relationship of landlady and tenant is converted into that of doctor and patient. With regard to the second point, we agree that it would be better that the two notices should not be hung up side by side, as medical practitioners should be careful to avoid doing anything to suggest that they stand in any special relation to midwives.

MEDICAL PRACTITIONERS AND PROPRIETORSHIP OF PATENT MEDICINES.

W. H. C. writes that a friend of his who is a member of the British Medical Association proposes to put on the market a proprietary medicine which will be advertised under a fictitious name from an address several miles distance from where he lives and practises, all traces of his connexion with it being kept concealed as far as possible. We are asked whether, if the facts become known, he will be liable to have his name removed from the *Medical Register*.

*** The General Medical Council has published no warning upon this subject, nor, so far as we know, has it ever had to express an opinion on such a case, but the rules of many of the licensing bodies prohibit the holders of their diplomas from having any interest in the sale of any secret remedy. We do not doubt that any one acting in the manner described by our correspondent would expose himself to the censure of any medical anthority before which his conduct might be brought, and would either have to sever his connexion with the proprietary medicine, or be deprived of his diploma.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees were conferred on March 6th:

M.D.—J. C. W. Graham, Trin.; H. B. McCaskie, Gonv. and Cai.
M.C.—T. H. Kellock, Emm.
M.B.—R. L. Ley, Pemb.; R. A. P. Hill, Gonv. and Cai.
B.C.—J. C. W. Graham, Trin.; R. M. Vick, Jes.

It has been decided, on the recommendation of the Special Board for Medicine, that a Certificate of Practical Instruction in the Administration of Anaesthetics will be required for the Third M.B. Examination, Part II, in December, 1909, but this regulation will not apply to students who have passed the Second M.B. Examination on or before December, 1908.

UNIVERSITY OF LONDON.

University College.

The Annual Report.

THE annual report for the year ending February, 1909, has been issued; the total number of students was 1,361, an increase of 170. In the Faculty of Medical Sciences there were 183 students.

Buildings.—Rapid progress has been made in the new buildings for the department of physiology; the bequest of £5,000 by the late Thomas Webb, of London and Cardiff, has been devoted to its completion and fitting. A special appeal is made for £70,000 for new buildings for the department of chemistry.

Research.—The organization of the arrangements for post-graduate courses and for research has been improved, and the number of such students has increased from 171 to 239.

Libraries.—The rearrangement of the libraries in consequence of the increased space available has made rapid progress, and the card catalogues are nearly complete; 3,580 volumes have been added during the year, of which 2,600 were bequests or gifts.

UNIVERSITY OF EDINBURGH.

University Court.

AT the February meeting of the Court the following additional examiners were appointed: Dr. John Gibson, Edinburgh (Chemistry); Dr. George Lovell Gulland (Practice of Medicine); Mr. William A. Brend, M.A., M.B., B.Sc., London (Forensic Medicine); Dr. A. Wallace Williamson, Medical Officer of Health for the City of Edinburgh (Public Health). Professor A. R. Cushny (London) and Lieutenant-Colonel Firth (Army Medical Department) were appointed additional examiners in connexion with theses submitted for the degree of D.Sc.

On the recommendation of the Senatus it was agreed to recognize the Public Health Laboratory of the University of Liverpool for purposes of graduation in Science in the Department of Public Health.

On the recommendation of the Senatus the Court granted leave of absence to Professor Chiene on account of the state of his health, and approved of the arrangements which had been made for the discharge of the professor's duties during his absence.

Dr. Alexander James and Dr. Claude B. Ker were appointed University Lecturers on Infectious Fevers.

The Services.

ROYAL NAVY MEDICAL SERVICE.

The Gilbert Blane Medal.

THE gold medal founded by the late Sir Gilbert Blane, Bart., to be given biennially, has been awarded by the Medical Director-General of the Navy and the Presidents of the Royal College of Physicians and the Royal College of Surgeons to Staff Surgeon Charles R. Nicholson, for his Journal of H.M.S. *Egmont*, November 6th, 1906, to December 31st, 1907; and to Staff Surgeon Arthur W. B. Livesay, M.B., for his Journal of H.M.S. *Bonaventure*, April 2nd to December 31st, 1907.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

Field Ambulances.

IN the note published in the JOURNAL of February 27th p. 564, it was said that we believed that the 3rd South Midland Field Ambulance was the first in the kingdom other than a cavalry field ambulance to obtain its full establishment of men. Lieutenant-Colonel H. G. Falkner, commanding the 3rd Northumbrian Field Ambulance, informs us that that ambulance having its head quarters in Hull has been full for some considerable time; on March 1st it had 224 men, and 8 officers, and 11 special reserve, making a total of 243. He adds: "We have laboured under the same disadvantages as the 3rd South Midland Field Ambulance, for we have no head quarters, some men having to be drilled in one part of the town, some in another; we have no wagons, nor harness, nor means of teaching the men their proper drill. We have also had the special mark of approval by being granted the permission to wear gold ornaments. I hope before long to be able to fill the two vacancies for officers."

Second London Division.

THERE are vacancies for officers in the second London Division, which the Administrative Medical Officer desires to fill up at an early date. The vacancies include two in No. 4 field ambulance, head quarters at Woolwich, three in No. 5 at Greenwich, three in No. 6 in London, three in the sanitary company, one in No. 3 general hospital, besides fourteen vacancies in the infantry battalions situated in various parts of the County of London, and six in the Artillery and Engineers. Full information may be obtained by application to the Administrative Medical Officer, Craig's Court House, Whitehall, S.W.

Examination for Promotion.

INSULA asks (1) what books to read for the promotion examination from Lieutenant to Captain in the R.A.M.C. Territorial, (2) whether there is any place that he could attend a course of practical instruction for the above, and (3) whether the R.A.M.C. (Territorial) has been granted the right to wear gilt ornaments.

*** (1) Our correspondent should purchase a copy of *The Regulations of the Territorial Force and for County Associations* (London: Wyman and Son. 9d.) where he will find particulars as to the examination for promotion. Books to read are *Royal Army Medical Corps Training*, *Manual of Sanitation in Its Application to Military Life* (2d.), *Regulations of the Army Medical Service* (6d.), *Regulations for Recruiting*, to be obtained through any bookseller or direct from Messrs. Wyman and Sons, Fetter Lane, E.C. (2) There is a Territorial school in each division where courses of instruction are given from time to time. An officer desiring to attend should put himself in communication with the Administrative Medical Officer of the division he resides in. (3) The R.A.M.C. (Territorial Force) as such has not been granted permission to wear gold instead of silver, but permission has been granted to a good many of the units which have asked for it.

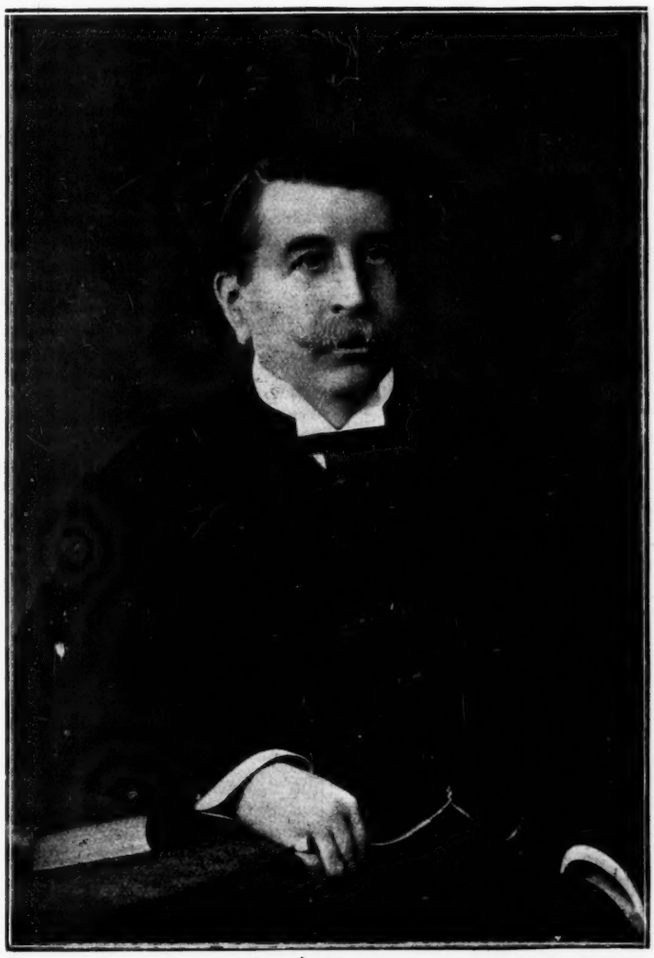
Obituary.

THOMAS WAKLEY, L.R.C.P.LOND.,

EDITOR OF THE "LANCET."

THE death occurred, at his residence in Hyde Park Gate, on Friday last, March 5th, of Thomas Wakley, part Proprietor and Editor of the *Lancet*, and although it was widely known that he was in bad health, the fatal termination of his illness has come as a shock to his many friends, among whom we count ourselves.

Thomas Wakley was born on July 10th, 1851, and was therefore only 57 when he died, an age at which nowadays a man counts upon at the least one more decade of active work. He was the only son of the late Thomas Henry Wakley, who between the periods of 1887 and 1907 was the senior Proprietor and Editor of the *Lancet*, and throughout his father's life worked hand-in-hand with him in the conduct of that journal. Thomas Wakley was educated at Westminster School and Trinity College, Cambridge. At school he took a high position in his classes, as is shown by the fact that he was chosen for a part one year in the famous Westminster play, and he obtained a leaving scholarship on entering the University. He also represented Westminster both at cricket and football, and won the quarter-mile.



THOMAS WAKLEY.

He entered the University with the intention of joining the medical profession, the further object being to follow in the footsteps of his grandfather and uncle, and devote himself to the conduct of the *Lancet*. He proceeded no further in the medical curriculum at Cambridge than the passing of the First M.B., and at this period of his life probably contemplated some other future. A serious fall from a bicycle compelled him, however, to relinquish all courses of study for some years. He was thrown violently from an old-fashioned high machine on to his temple, sustaining what was possibly from the symptoms some slight fracture of the base of the skull. For some days his life was in danger, but eventually a slow recovery of health was established, although he never recovered complete sight in his right eye.

The resolve to enter the medical profession, and to join his uncle, Dr. James Wakley, in the conduct of the *Lancet*, now returned; and he entered as a medical student at St. Thomas's Hospital, obtaining in 1883 the diploma of L.R.C.P. Immediately afterwards he entered the office of the *Lancet* to begin the working life of a journalist under the eye of his uncle and of Mr. H. A. Beckett, Dr. Wakley's competent assistant. He was thus enabled to get the benefit of three years' routine work under two thoroughly experienced medical journalists, and under also the eye of an informal sort of committee of reference who assisted Dr. James Wakley in the conduct of the *Lancet*, among whom may be mentioned Surgeon-General Marston, C.B., Sir John Tweedy, and the late Dr. James Grey Glover. Dr. James Wakley during the last two years of his life was afflicted with a malignant disease of the tongue, and in September, 1886, he succumbed to his fatal malady, and the editorship of the *Lancet* passed to his elder brother, the late Mr. Thomas Henry Wakley, and to his son, the deceased. For over twenty years, therefore, father and son co-operated in the conduct of a paper founded by the father's father more than sixty years earlier, figures which constitute, we should think, a record in heredity applied to journalism.

It would not be exactly our province to estimate Thomas Wakley's career as a journalist further than to say that he worthily maintained the honourable traditions of the great journal whose fortunes he was called upon to direct. But there was one side of his work to which we desire emphatically to bear testimony. The fairness of mind for which he was so well known among his friends led him into relations with ourselves of a particularly pleasant sort. As a result both journals came to recognize that while keen rivalry was the best incentive to enterprise, such rivalry in no way precluded the existence of cordial good feeling between those responsible for the two journals. He was a man who by speech and manner inspired absolute confidence in his straightforwardness, and longer experience only proved that this was the root quality in his character. His word was his bond, and he was constitutionally incapable of a mean action. He had a high ideal of the obligations of medical journalism, and of the services which it was capable of rendering to the profession in this age. When the International Association of the Medical Press was formed he took a warm interest in it, undertook the duties of Chairman of the National Committee, and on the two occasions on which the International Committee met in London he extended to the members (on the first occasion in association with his father) most generous hospitality.

In private life Thomas Wakley was a very quiet and retiring man, and, although by a few intimate friends his excellent personal qualities were well recognized, in anything like society at large he was comparatively unknown. Few men, indeed, ever held so public a position to use it with so little attempt at self-advertisement or self-advancement. He rarely took long holidays, and when he did he seldom went further than to some riverside resort, generally somewhere on the Thames. He was particularly attached to the Thames, and in 1896 wrote an amusing booklet recording four or five trips taken with his cousin, Mr. Frank L. Playford, the famous sculler, in their boat. *The Log of the Wyvern* was only privately printed, but it forms an interesting record of several quiet holidays of a kind that are no longer quite possible.

Thomas Wakley was an enthusiastic Freemason, was the recipient of several Grand Lodge Honours, and a generous supporter of the Masonic charities. He also was

a keen numismatist, a Fellow of the Royal Numismatic Society, and the possessor of a valuable collection of coins to which he made regular and constant additions.

Wakley lived until middle age as a bachelor in his father's house, but in 1903, to the great pleasure of his friends, he entered upon married life. He married Gladys, daughter of the late Mr. Norman Baron, by whom he leaves one son.

The body was cremated at Golders Green on March 9th; the funeral service, held at St. Mary Abbots, Kensington, on March 10th, was attended by, among others, Sir Constantine Holman, Sir Shirley Murphy, Dr. J. F. W. Tatham, Dr. David Nicholson, C.B., Surgeon-General Marston, C.B., Surgeon-General H. Skey Muir, C.B., Dr. Danford Thomas, Dr. Buzzard, Mr. Edmund Owen and Mr. Guy Elliston, representing the British Medical Association, and Dr. Dawson Williams, Editor of the British Medical Journal. The interment at Putney Vale Cemetery was attended by the personal friends of the family.

The cause of death was a gradually progressive toxic anaemia.

Sir JOHN WATT REID, K.C.B., M.D.,

FORMERLY DIRECTOR-GENERAL, R.N.

By the death from pneumonia, which occurred in London on February 24th, of Sir John Watt Reid, the navy loses a man who was prominent in its medical service during the latter half of the last century.

Born in May, 1823, he was in his 86th year at the time of his death, and had retired from active service since 1888.

He received his medical education in Edinburgh, and took the diploma of L.R.C.S. in 1844, and graduated later at Aberdeen. Entering the navy in 1845, he served as Assistant Surgeon on the Mediterranean and North American Stations. As a Surgeon he again served on the Mediterranean Station during the war with Russia in 1854–5 in H.M. ships *Inflexible* and *London*, being stationed in the Black Sea until the fall of Sebastopol. For these services he received the Crimean medal with clasp and the Turkish medal. From 1857 to 1859 he served in China on board the hospital ship *Belleisle* during the war, and received the China medal.

From 1860 to 1864 he again served on the North American Station, and in 1861 received an expression of their Lordships' satisfaction at his zeal and attention to duties during a severe visitation of yellow fever at Halifax. As a Staff Surgeon, in 1874, he was employed on board the hospital ship *Nebraska* during the Ashanti campaign. He was mentioned in dispatches, received the medal, and was promoted to Deputy Inspector-General for his services. As Deputy Inspector-General he was employed at Bermuda and Haslar Hospitals. In February, 1880, he was selected for the appointment of Medical Director-General of the Navy, his promotion to Inspector-General being made at the same time. Almost immediately after his appointment — March 5th, 1880 — a Committee on the Medical Officers of the Navy was appointed, with Rear Admiral A. H. Hoskins as President and Sir John Reid as one of its members. His tenure of office as Medical Director-General was marked by the abolition of Netley Hospital for the instruction of naval medical officers on entry and the institution of a course of instruction at Haslar Hospital, the introduction of the payment of gratuities to officers wishing to withdraw after short service, and the first appointment of nursing sisters to naval hospitals.

He was appointed Honorary Physician to Queen Victoria in 1881, and on her death in 1901 he was made Honorary Physician to the King. He was created K.C.B. in November, 1882; in 1884 the honorary degree of LL.D. was conferred upon him by the University of Edinburgh; and shortly after his retirement he received a Good Service pension of £100 a year.

All who came in contact with him were struck by his genial manner and kind-heartedness; he was well known to and welcomed by all branches of the navy, and by his many acts of kindness helped to popularize the Naval Medical Service, with which he had so long and honourable a connexion.

JOSEPH HENRY IRVIN,

M.R.C.S.Eng., L.R.C.P.I.,

HON. MEDICAL OFFICER, ROYAL LANCASTER INFIRMARY.

To the deepest sorrow of all his professional brethren, and every one, rich and poor alike, in the town and district around Lancaster, Joseph Henry Irvin passed away after a few days' illness on February 13th, in his 54th year. He was the second son of the late Mr. David Irvin, J.P., of Preston. He received his professional education first at the Manchester Infirmary, and afterwards at St. Mary's Hospital; took the diploma of L.R.C.P.I. in 1878, and that of M.R.C.S.Eng. in 1880. In 1880 he settled in Lancaster, and soon after joined Dr. William Hall in the partnership which lasted until his death.

His professional ability was of the highest order, his surgical knowledge such that his opinion was sought for and valued in the highest degree by every one of his colleagues in the district, and his manipulative skill and resource in moments of emergency were undoubted.

In February, 1882, he was elected an Honorary Medical Officer of the Lancaster Infirmary, now the Royal Lancaster Infirmary, and this office, together with that of Governor of the institution, he retained up to the time of his death. He was a strenuous worker, and to his younger brethren of the staff he was a tower of strength. He had an individuality of his own, only known to his intimate friends, and his place in the hearts of his colleagues in the Infirmary and in the town can never be filled. During his student days he was a resident pupil for most of his time in the Royal Infirmary, Manchester, and he there acquired that excellent grasp of surgical emergencies which bore such good fruit in later life. There he met many men who have since made their mark in the profession, and whose close

friendship he retained until the day of his death. The following extract from the *Times* some time in September, 1876, shows the plucky and unselfish side of his character; it describes an incident in his life known to very few, for his modesty in all things connected with himself was great.

Heroism.—The Rector of Cheadle, Cheshire, writes to us: "Can you find space to record an unostentatious act of heroism? A poor factory operative had his leg recently amputated in the Manchester Infirmary. The loss of blood was so great that his case was given up as hopeless. He was all but dead, when the surgeon stated that nothing but an infusion of blood could save his life. One of the students (a Mr. Irvin, I believe) volunteered to be bled, and 25 oz. of his life blood were taken from him at his own most serious risk and infused into the dying man. Yesterday I saw the patient, who is now on a fair way to convalescence. Need we wonder that the noble band of English doctors on the battlefields in Turkey should reflect such credit upon their country?"

Transfusion in 1876 was a very different matter from the saline injection of the present day, and his volunteering at a moment's notice to perform an act whereby he knew his life might be placed in jeopardy (as it actually was for many weeks afterwards) proved that he was worthy of the best traditions of our profession.

Dr. Irvin was a good sportsman—a first-rate shot and a keen golfer; in his earlier life he was an excellent swimmer, and did much to encourage and extend a knowledge of this art among the boys and girls of the town. Good music was especially dear to him, and he was himself an excellent musician. He was an enthusiastic Freemason, and his presence at the meetings of his lodge was always a source of pleasure to the members of the craft.

For some eight years he was Acting Surgeon to the 1st Volunteer Battalion Royal Lancaster Regiment, but resigned his appointment in June, 1889.

Dr. Irvin leaves a widow and one son and daughter.

He was buried in Lancaster Cemetery on February 16th; the funeral was one of the largest and most representative ever seen in Lancaster. Every medical man for miles around attended and thus paid a last tribute of respect to the "straightest man in the profession," while all classes of society from the highest to the lowest showed by their presence the love they bore him.

ROBERT POLLOK, M.B., F.F.P.S.GLASG.,

PHYSICIAN, SAMARITAN HOSPITAL FOR WOMEN, GLASGOW.

THE death took place on February 11th of Dr. Robert Pollok of Pollokshields, Glasgow, occurring quite suddenly, in the 54th year of his age. He was born at Tarbolton, received his early education in that locality and completed it at Ayr, whence he passed on to Glasgow University and graduated M.B., C.M. in 1876; some years later he received the diploma of F.F.P.S.Glasg. Meanwhile he visited various places of medical study on the Continent, and finally equipped himself for private practice by acting as assistant to various medical men of standing in the West of Scotland. Among these was the late Professor James Morton of Anderson's College, and it was owing, perhaps, to this circumstance that Dr. Pollok eventually joined the staff of the dispensary of Anderson's College. In Glasgow he soon established both a sound practice and an excellent repute with the public and his professional colleagues. His work in connexion with Anderson's College he carried on up to the time of his regretted and untimely death, another appointment held by him being that of Physician to the Samaritan Hospital for Women. Dr. Pollok found vent for his activities in many directions, but professionally it was the subject of obstetrics, perhaps, for which he showed the strongest predilection. Some excellent contributions to the current literature of this subject came from his pen. Amongst them was one on 2,000 cases of delivery in private practice, dealing with the difficulties encountered and the fashion in which they were met. In another he considered abortion, its avoidance, and its treatment. He was a man, however, of far more than one intellectual bent. The Philosophical Society and the Natural History Society both owned him as a member, and he played, likewise, an active part in the affairs and debates of the Glasgow Obstetrical and Gynaecological Society and the Glasgow Southern Medical Society. Each of these in turn did him the honour of electing him to the Presidential Chair. He was also medical referee to insurance societies, while outside purely professional and scientific occupations he took a great interest in the medical work of the auxiliary forces. Joining the Blythswood Rifles early in his career he evidenced his keenness in this connexion by volunteering to proceed to South Africa early in 1900. There he saw a great deal of service both at base hospitals and with moving columns, and returned with the Queen's medal and three clasps—including one for the hard fought action at Belfast—and an honorary Captaincy in the army. When the Territorial Force was instituted he showed the same patriotic interest in its success, and at the time of his death had not long been gazetted in charge of the 4th Scottish Hospital under the Territorial scheme. A man of such mental and physical activity and excellent professional and social qualities naturally attracted great esteem, and his death leaves a gap which will not rapidly be filled.

DR. JOHN MACDONALD MACLENNAN died suddenly in Glasgow on February 23rd. He graduated in Arts at the University of Edinburgh, and followed this up by taking the M.B. and C.M. degree in 1885. Owing to ill health he was never able to undertake the duties of private practice, and for several years he acted as Surgeon on board Allan, Castle, Clan, and other liners. His experiences in many parts of the world were varied and thrilling. He was shipwrecked off the coast of Chili and again at the mouth of the Ganges. Dr. MacLennan was possessed of a genial and kindly disposition, and made many friends wherever he went. He bore the misfortune of prolonged ill health with great fortitude, but of late years he became so seriously ill that he had to give up all work. He retired to Kingsley about three years ago; he subsequently went to Glasgow for further medical treatment, and remained there until the time of his death. Dr. MacLennan was unmarried.

THE death of Dr. EASTON, on March 4th, is a matter of deep sorrow and sincere regret to a large circle of personal friends as well as to those who were associated with him in his many public activities. Thomas Easton, the son of the Rev. Matthew George Easton, was born in 1859 at Girvan Manse. In 1862 the family migrated to Darvel in Ayrshire, where the most important part of Rev. M. G. Easton's work was done and where now in memory of his pastorate the Easton Memorial Church stands. Thomas Easton received his earliest education from his father and at the village school; later he was placed at the Ayr Academy, where he obtained an excellent classical training. From there, in due course, he proceeded to Edinburgh University, graduating M.A., and subsequently M.B. (1884). Before commencing practice he studied in Berlin and acquired an excellent knowledge of the German language, which proved valuable to him through the later portion of his life. On his return to England he spent some time in St. Thomas's Hospital, London, and in 1886 graduated M.D.Edin., his thesis on manual treatment of diseases being commended. After acting for some time as an assistant in London he succeeded to the practice of his uncle, Dr. David Easton, of Stranraer, in Wigtownshire, where he remained until 1899, living a life of strenuous and unremitting toil. He held many public appointments in connexion with the workhouse, the lighthouse, the reformatory, etc.; he was Medical Officer for the parish of Leswalt, and became a J.P. for the county. The strain of work caused a breakdown in health, and he resigned his many offices in Stranraer, seeking the much needed recreation and rest in Continental travel. The change was speedily beneficial, and Dr. Easton settled in practice in Southampton; he was appointed a Medical Officer to the Poor Law, and was elected to the Borough Council. He became a member of the Education Committee of the borough, and for a time was Chairman of the Higher Education Subcommittee. He was also a member of the Endowed School Governors and of the Council of the Hartley University College. All useful educational movements received his sympathy and support; he was one of the original members of the Southampton Record Society and of the Historical Association. His death at the early age of 49 is deeply deplored and much sympathy is felt with his widow and one daughter.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

Neurasthenic Asthenopia.

OCULUS asks for advice in the treatment of a case of neurasthenic asthenopia in a young man whose general condition is now practically normal, who is free from organic disease, and who leads a hygienic life. Errors of refraction have been corrected by an ophthalmic surgeon, and there is no doubt the appropriate correction has been arrived at. On some days he can read or write for several hours without distress, on others, after using his eyes for half an hour, an aching and strained feeling comes on, chiefly referred to the eyeball itself, which makes it impossible to continue. The position of his desk has been considered, as have also the nature and direction of the light by which he reads. Is there any form of eye massage or douche which could be applied?

ANSWERS.

Hospital Floors.

DR. JNO. MILSON RHODES (Didsbury) writes: "B. G. M." will find Parian cement the best for filling up the cracks in the hospital floor; failing that, the next best in Portland cement.

A Case for Diagnosis.

A. S. M. writes in reply to "B. S." to suggest that the case should be regarded as one of dilatation of the stomach, and that it be treated by lavage, and phenol in pill form after food.

Treatment of Bronchial Asthma.

A. S. M. writes in reply to the query in issue of January 30th, *re* treatment of bronchial asthma, to suggest for trial the tincture of lobelia and glycerine (equal parts) in an Oppenheimer's Aerizer.

Income Tax.

C. E. A. A.—If the surveyor agreed with our correspondent to allow payment of the tax for the year 1908-9 to stand over until he should be in a position to render an account of his profits from May 1st, 1908, to April 30th, 1909, there is no reason why this arrangement should not be adhered to. In that case C. E. A. A. would not be required to send in his next return until after April 30th, 1909, and if he receives an earlier application for a return he should, for his own protection, draw the attention of the surveyor to the arrangement stated to have been made. Moreover, if the surveyor made such an arrangement, he is scarcely likely to insist now on payment of the original demand. No point of law appears to be involved, and our correspondent does not give any reason for supposing that the arrangement made will not be carried out by the surveyor.

Boys' Schools in France.

SOME weeks ago an inquiry was inserted from a correspondent who wished to hear of a school or tutor in France for a boy of 10, where he could receive a good English education and at the same time learn to speak French fluently. Several replies were received and their substance communicated to the inquirer, but it is suggested that the information may be of use to other parents. Dr. A. P. Trinder (Bembridge, Isle of Wight), and Dr. W. Pitt Palmer, D.P.H. (Babbacombe, Torquay), both recommend a school kept by the Rev. E. Owen Burbidge, B.A.Lond., 19, Route de la Hève, Sainte Addresse, Seine Inférieure, France. Sainte Addresse is a suburb of Havre, and there is sea-bathing in addition to hockey, football, and a gymnasium. Both Dr. Trinder and Dr. Palmer before putting their sons to this school inspected it with special reference to sanitary arrangements, both speak well of the surroundings of the house, and Dr. Trinder can guarantee the sanitation and water supply, the latter being, he says, one of the best in France. Dr. O. Trafford Owen (Blackburn) recommends a school information as to which can be obtained from Dr. Philip, 95, Grande Rue, Boulogne-sur-Mer.

LETTERS, NOTES, ETC.

Southwold Libel Case.

THE following additional subscriptions have been received by the fund opened to assist Drs. Mullock and Tripp in defraying the heavy expenses which they incurred as the result of the recent action which they were called upon to defend:

	£	s.	d.
Sir Victor Horsley, London	5	5	0
Dr. W. E. Baylie, Yoxford	3	3	0
Dr. W. M. Crowfoot, Beccles	2	2	0

Cheques should be made payable to Dr. H. P. Helsham, Beccles, or to Dr. W. Tyson, Lowestoft.

Action of Radium on Corns.

DR. RALPH BROWNE-CARTHEW (London, S.W.) writes: Some of your readers may be interested, with regard to radium, that amongst its humbler possibilities is its power to remove corns. In this it is very effective, and gives a simple demonstration of its power of action where there is irritation and proliferation of epithelial cells.

A Protest and an Explanation.

DR. H. SELFE BENNETT (London, W.) writes stating that he is informed that many members of the profession and the general public, friends of his and utter strangers alike, have recently received a type-written letter dated from his address and marked "Private, personal, and without prejudice," ending with a sentence which reads as follows: "I am happy to think that though I have come across many rascals in my time, you are still an exceptional specimen of humanity in the experience of (Sd.) H. Selfe Bennett." Dr. Bennett informs us that the letter thus purported to be reproduced was written six months ago to the defendant in a nullity suit in which he gave evidence. He desires it to be understood that the communication has been sent to the numerous persons who have received it without his knowledge or sanction, and that he is taking legal advice on the subject.

Antivivisection and the Poor.

HIRUDO writes: In a leaderette in the JOURNAL of February 20th you quote with approval the remark by Dr. Maude that Henry Hunt was "a prototype of many Radical politicians of to-day who are fond of expressing very decided opinions on scientific questions of which they have little knowledge." May I venture very respectfully to suggest that the omission of the word "Radical" would not spoil the observation, and would be more in keeping with the supposed non-partisan character of the JOURNAL?

*** We in turn would venture "very respectfully to suggest" that there is no partizanship in the statement of a notorious fact. It is not a question of political opinion, but of temper of mind. Independence of thought exercised within its proper sphere makes directly or indirectly for progress; but in scientific questions the "great heart of the people" can scarcely be taken as a trustworthy guide.

Hospital Football.

FOOTBALL during practically the whole of last week was impossible as, even in London, the grounds were several inches under snow. Last Tuesday, however, after nearly three weeks' delay, Middlesex Hospital replayed St. Thomas's at Richmond, and defeated them in a hotly contested game by one try to nothing. Curiously enough, despite the fact that on the last occasion when the two hospitals met there was a keenly disputed if rather unscientific match, there was a very poor attendance. The ground was in terrible condition owing to the weather, and after the first few minutes of the game rendered anything like accurate football impossible. The hospital style is notoriously a game for the forwards, and this feature, thanks to the condition of the ground, was specially marked. The inevitable scrambling game resulted, one pack or other breaking through and dribbling the ball along until some one by a lucky kick managed to find touch. Despite these adverse conditions the superior qualities of the Middlesex backs told, for though St. Thomas's usually had the better of the forward game, the Middlesex halves again and again saved the situation by their smart tackling and their clever kicking into touch. Whenever they were able to pick up the ball and managed to start a run, their superior pace made itself felt, and in their combination they proved very much more than a match for the St. Thomas's men. During the whole of the first half the play was up and down the field, neither side showing itself markedly superior, and it seemed as if another draw would have to be declared. With the beginning of the second half, however, play was much livelier and brighter, and the two fifteens abandoned the defensive attitude adopted in the first half and a more open and a faster game was played. Middlesex succeeded in pressing St. Thomas's back, and O'Kane cleverly took advantage of an opening, slipped over the line and scored his try. Harrison took the kick but failed to convert, and time was called without there being any further scoring. For the winners Penny and Saunders were especially conspicuous, while St. Thomas's owed most to Warburton and Meakin. As a result Middlesex enters the final round and it has been arranged that the match with Guy's shall be played on Tuesday next at Richmond.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication; and, if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.